American MILK REVIEW

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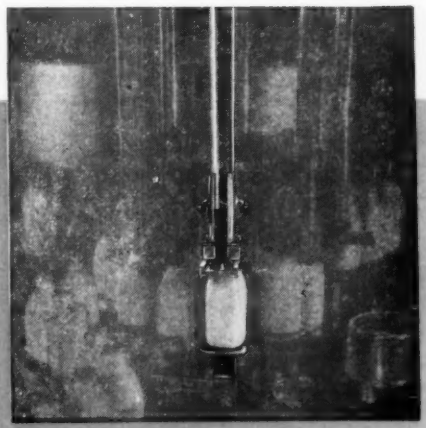

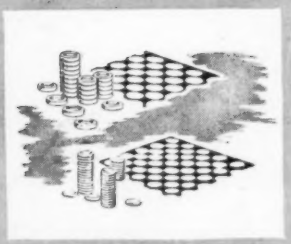

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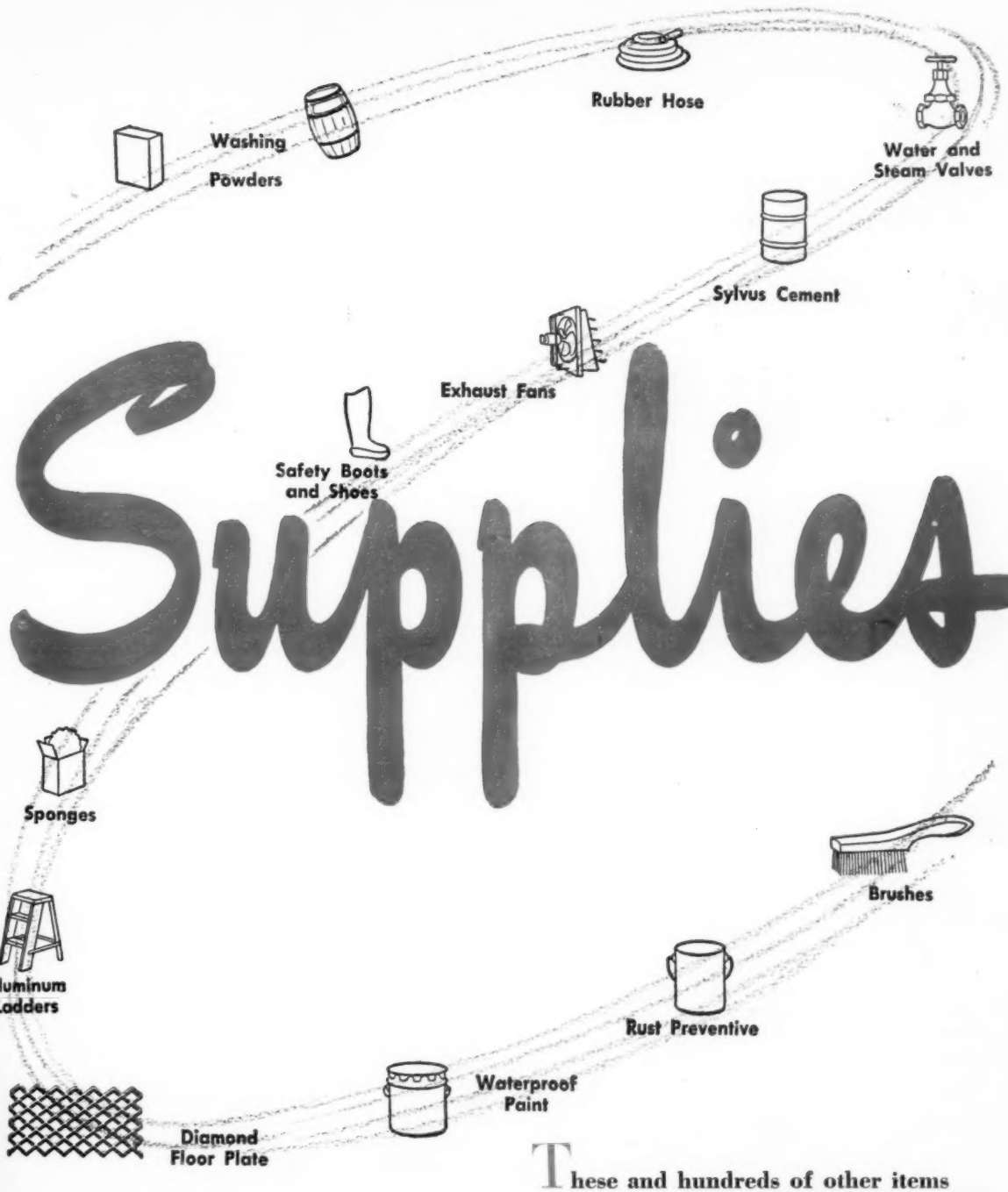

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Less REGULATION *More* COOPERATION

By **MAC D. LEVIN**

THERE ARE in the dairy industry a great many plant operators and their assistants whose lives are a constant stream of reports. A partial list of reports required from the average dealer in New York shows eight monthly reports, two weekly reports, and eight other reports made at varying intervals. On the basis of this situation alone one might conclude that regulation had reached an all time high. But regulation of itself, irritating though it may be, is not the real danger. The real danger is the gulf between producer and dealer that the regulations and rulings are creating.

An analysis of the New York Metropolitan Milk Marketing Area shows up this weakness in the milk marketing system. The metropolitan area is made up of the five boroughs of the City of New York, all of Long Island, and Westchester County. This area lies at the southern tip of New York. The milk shed that supplies this area with inspected fluid milk extends over the entire State of New York, western Vermont, northern New Jersey, and eastern Pennsylvania, plus a plant in Massachusetts and one in Connecticut. Approximately 500 plants process the milk and milk products for the metropolitan area. Possessed of a voracious appetite the region consumes annually one and a half billion quarts of milk and thirty million quarts of heavy cream. The milk production in the shed amounts to about three and a half billion quarts. In studying these figures one can readily see that the production is close to twice that which is needed for milk and fluid cream requirements.

Variations in New York Order

The New York Metropolitan Milk Marketing area is under federal order No. 27 and New York State order No. 126. The order is administered by Charles J. Blanford with offices in New York City. One of the chief differences between this order and some other federal orders is that this order limits the marketing of milk products in the area, whereas the other orders, and the act with which the orders originate, do not prohibit, thru pricing or other regulations, the marketing of milk products in their respective areas. Another item in this order that cannot be found in any other is the classification breakdown. An economist's haven of fourteen classes has been created, whereas none of the other orders have more than six classes. Most of them have only three classes. Besides the official classes there is an administrator's non-classifiable class which is at the mercy of the unknown. If the milk which is produced and delivered at a pool plant is not classified in the highest price class, the administrator may choose to place it in a class other than fluid milk, classes 1A, 1B, 1C or 5A, which are the highest price classes. Under this order the administrator has the authority to direct one distributor to sell fluid milk from his own plants to his competitors who are in short supply. Another item in this order which cannot be found in any other is that milk used in cheese and other manufactured products in the area, is priced in the highest price milk class. Cream used in cheese and butter must be paid for at a much higher price, much higher than the competitive price. Another difficulty in the order is the practice of pricing in accordance with a plan and not in accordance with use. As a result of this price plan there are times when milk goes into butter and cream goes into cheese when according to practical dairy management it should be the other way around.

Still another way in which the New York order differs from the other orders is the rebate provision. Under this provision, money from the producers pool is returned to the dealer for storing cream in the flush periods.

With each regulation the contacting and cooperation of the dairy farmer and plant operator hits a new low. The dairy farmer is left dependent upon the U. S. Department of Agriculture price schedule and support program while the milk plant operator is left holding the bag and must seek the best return possible without any constructive program for marketing his milk and milk products. In support of this contention, the following paragraphs will show how the Dairy Branch, thru the New York Milk Market Administrator, keeps the dairy farmer groups divided as well as the dealer groups and also how the spread between the price paid by the consumer and that paid to the producer is maintained at its greatest possible level.

Competition With Fluid Milk

What is considered the spread in the New York order is the difference between the class 1A price classified for equalization in a settlement pool at about 200 miles from the marketing area, and the price paid for home delivery of milk to consumer. (The store price to consumer is 2c to 3c less). Taking October 1948 as an example, the dairy farmer's price for fluid milk was figured at 13c per quart whereas he actually received 11⅛c per quart. The difference of one and a half cents is applicable to reduction in price to take care of surplus milk which was used in other classes and other fluid markets and returned less than 13c a quart, in some instances as low as 7.6c a quart for milk produced for fluid use. In determining the spread it is best to take into account the prevailing prices of home delivered milk in the marketing area as of October 31, 1948. Taking in consideration the fair average on quantities sold, the following prices prevailed. Prices in quarts are: Cents

Grade A Regular	25⅛
Homogenized Vitamin	26⅛
High Test Special Guernsey	27½-28
Milk Drinks	25⅛

A survey and study of the percentages of sales in each category and a further consideration of the additional butterfat

above the 3.5% which costs the milk dealer 4c for each 1/10 point above 3.5% milk it would be fair to assume that 26c would be the proper price for the purpose of the spread. This creates a picture where the spread is equal to the dairy farmers price of 13c for this period and in future periods or months, the dairy farmers return will probably decrease with the spread remaining the same. *These conditions exist only because of regulations which make the manufacturing products compete with fluid milk sales.*

It is generally agreed that if we did not have the regulations we are now under but operated on the basis of direct dealing and cooperation between the dairy farmer and the plant operator, it would result in healthy competition for the fluid market and at the same time return the same amount of monies to the farmer. One of the disturbing factors in high costs and spreads is the fact that surplus milk charges can be reduced to a minimum thru direct dealings of producer and dealer. This happens when all parties concerned know that the price is subject to bargaining and not to delayed tactics of the government thru regulatory methods that produce a growing distrust.

In recent months representatives of dealers in the Boston market came to New York to a Federal hearing on pricing of fluid milk in the New York Area. These representatives were able to get into the New York Order on Pricing of Fluid Milk, a regulation making the New York price subject to the Boston area price. This regulation means that the latter area will be supplied with fluid milk during the short period at the expense of New York area, an area several times larger than the Boston. One cannot help but think that the claimed experiment should be for the larger area such as New York with other markets such as Boston and Philadelphia subject to New York.

Value of Formula Is Questioned

It is the opinion of the practical milk handler that regulations and formulas based on data and statistics of months and years back has no bearing on the pricing for periods to come. The joker in the Boston pricing formula, for example, is that it uses totally unrelated figures such as city labor, prices of commodities purchased by housewives and eating establishments or on sales of large stores. The farmer is wholly dependent on the price of feed, local weather conditions, surrounding area roughage supply situation, unemployment and farm help, price of beef and milch cows. The dairy farmer is the greatest believer of the theory of supply and demand. If the price of milk is too low the dairy farmer, with high costs of feed, roughage, and help, will cut his production down by reducing his costs, by feeding less, using less costly roughage, and milking twice daily instead of three times daily. On the other hand, if the price of milk is high the dairy farmer is the first one to step up his production by feeding more and spending more time in milking.

Proof of the success of a program of cooperation between the dairy farmer and the dealer, exists today in the State of New Jersey and the State of Connecticut. In New Jersey there is an agreement between the producer and dealer based on production in relation to demand. The producer is in a position to control his production in accordance with the expected sales of the dealer. Every agreement made tends to eliminate costly surplus milk which would automatically come back on the individual producer. Under the cooperative plan the consumer gets a price comparable with other costs. The dealer gets a better return on his investment. Under regulations the dealer must operate his plant on a three to one basis. He is forced to plan his operations, plant, and help to handle three times his low need, which, in some cases, doubles the cost of handling milk. Under government regulations the dairy farmer will produce milk in what he thinks is the natural way. He will let the other dairy farmer control production, because under the government orders and rules and regulations, they will both get the same price.

MEET THE AUTHOR

Mac D. Levin is a New Yorker, he is not a commuter he is a New Yorker. A product of the City's public school system and a graduate of New York University, he is by profession an accountant. When the New York Order went into effect in 1938 Mr. Levin was one of its first employees. Through the ensuing ten years he was in close contact with complicated operation of the New York milk market. In this article that pulls no punches, Mr. Levin tells you what he thinks.

Another particularly irritating form of government regulation is the series of reports that are required. Not only is this an unnecessary expense but in some cases the reports are repetitious and most difficult to prepare properly. Some of the reports are simply filed away by the receiving office for possible reference as late as 6 months or a year later if referred to at all. A partial list of reports filed by a milk dealer of the average in the New York Marketing area is as follows:

1. Monthly country plant report by the 10th.

2. Monthly city plant report by the 15th.

3. Monthly branch plant report by the 15th.

4. Monthly producers payroll with full details on premiums and deductions including all check numbers by the 25th.

5. Weekly reports by telegram within 24 hours.

6. Storage cream storage reports for each lot by a limited time subject to expert advice and handling. There may be as much as 100 lots a month.

7. Storage cream rebate claims for each lot and a history for each lots utilization. There are time elements and must carry a prayer for the proper preparation and getting your money back in accordance with a number of rules and regulations inconsistently interpreted.

8. Transfers of storage cream that the dealer hopes has met some requirements or rules and regulations and is properly prepared.

9. Withdrawal report to be filed under time elements and with a prayer that it is not lost otherwise no rebate.

10. New Producer on payroll—history and other data.

11. Producer withdrawal from payroll—reasons and other data.

12. Report on outstanding checks and reason for failure of producer to deposit check for payment, within reasonable time.

All of the above reports are made to the N. Y. Milk Market Administrators Office at New York City.

The following reports to the U. S. Department of Agriculture:

1. Monthly warehouse and storage holdings of milk and milk products.

2. Semi Annual manufacturing and sales reports.

3. Monthly evaporated and condensery reports.

4. Monthly dry milk reports for each plant.

5. Monthly dairy products report for each plant.

6. Weekly reports on truck and rail shipments and receipts of milk, cream and butter.

It is unfortunate that the administrator can, at his discretion request reports and promulgate regulations without consulting all parties concerned. But it is more disturbing to realize that far from producing better relations the gap between the dealer and the producer is growing wider.

OUTLOOK FOR WINTER

By **NORMAN MYRICK**

JUST ABOUT THE ONLY SOLID, irrefutable fact in the late fall and winter milk picture is that Her Majesty of the Milk Pail is still in there giving down. The milk business is traditionally a field subject to a multitude of local variations and this period in the closing months of 1948 is not an exception. Texas reports, "the worst milk shortage in years," while the folks out in Indiana see, "plenty of milk to satisfy all needs of the State." North Dakota and Illinois report production trends fairly steady while Maryland and Massachusetts are still wrestling raids made on dairy herds with the high price of beef. Colorado production is on the upswing and officials in the United States Department of Agriculture see an overall improvement in the production of milk.

The *American Milk Review*, in an effort to give dairymen some idea of the prospects for fluid milk during the next few months, sounded out milk handlers, trade associations, and government officials from one end of the country to the other. The reports were varied but one or two common trends emerged.

Perhaps the most widely held opinion concerned price adjustments. With one exception all individuals queried expressed a belief that prices would undergo a revision. Prices to farmers as well as resale prices are expected to go down, although to date, downward adjustments in resale prices have not kept pace with the drop in prices to producers. Whether this is due to a feeling among handlers that the drop in producer prices is a temporary proposition and they are chary about following because of the possibility of an upturn in near future, or whether profit taking considerations dictate the making of hay while the making is good, is open to question. The fact is that farmer prices will probably fall off, followed by a similar reaction in retail prices.

Lower Grain Prices

Advice from Massachusetts declares, "Fedeal Milk Marketing formulae in the Boston, Lawrence-Lowell, and Fall River areas will prevent any consumer price change before January. At that time a drop of 1 to 1½ cents is anticipated." Despite the inroads made on dairy herds by high beef prices, another New England dairyman, W. P. Davis, sees the bumper grain crop as a source of more milk and a consequent reduction in price. Says Mr. Davis, "A reduction in grain prices will mean a reduction in milk prices. Dairy ration which was selling at $113 a ton last winter will drop to $80 this year and is expected to go even lower. This is also a direct result of the sale of milk cows for beef. Less cows, a lesser price for such a large crop."

Price adjustments have already been made in North Dakota where fluid milk prices reacted to the sagging butter market in October. Milk decreased one cent a quart in several cities in the State. This decrease, of course, was not confined to North Dakota but was experienced in many markets throughout the nation. Chicago reports, "Price adjustments are being made monthly on the government formulas, which, with certain premiums are set on the basic cost of evaporated milk, cheese, butter, and powder depending on which is the highest." Indiana looks for a possible decline in price followed by a strengthened market. Dick Larson, able secretary of the Indiana Dairy Products Association, writing on November 10 says, "Bottled milk prices may even come down within the next few weeks if condensery prices continue to fall. Personally, I look for farm milk prices to level off the end of this month and then strengthen for December and on through the first few months of the year." On the national front economists see considerable local variation but hazard the guess that prices will not go up again.

Influence of Condenseries

The price situation in the mid-west stands out as the most controversial portion of the picture. Many dairymen feel that the price, tied as it is to condensory prices, has gone down too far. The argument is that the downward swing has not been a true reflection of economic conditions and that some upward trend will take place as the price seeks its logical level. This is one of the local differences that was noted earlier. What happened in the mid-west was largely the result of over sanguine expectations in regard to the market for evaporated milk. Anticipating a strong market, condenseries apparently purchased large stocks of milk at high prices in order to meet the expected demand. The demand failed to materialize and what has been described as a "fierce reaction" set in. Presumably a good share of the sharp drop in producer prices can be assigned to condenseries that are attempting to protect high priced inventories. In any event the fluctuations in evaporated milk and variations in the butter market have had their effect on fluid prices even though the alterations do not reflect accurately prevailing local conditions.

The one market that foresaw no price changes was Colorado. From that sturdy region the word is brief and to the point, "No price changes are anticipated at this time."

Ordinarily it is impossible to divorce price levels from production. Fundamentally it is not possible to do so now. Most sources note favorable conditions for milk production which probably accounts for the practically universal feeling that there will be a downward trend in prices. It should be re-emphasized, however, that in some local cases, such as the mid-west, prices are not necessarily a true reflection of available supplies. Mr. Larson says of the Indiana position on production, "Condenseries and cheese plants have plenty of milk at the present time and both fluid and manufacturing operations have been churning to save fat. Still, butter production in the state was 20 per cent below a year ago, showing how much cream has shifted to milk." Mr. Larson also points out that, "with feed so plentiful that farmers don't know what to do with it here in the State, cows will be fed heavily, but they were fed well the past spring and summer. Cows cannot give more than so much milk per lactation period. It is not unreasonable to expect that production will go down in the State for the next few months—enough to stabilize or raise somewhat the farmer's price." The Indiana secretary also notes, "a record number of replaceable heifer calves on dairy farms," which, taken in conjunction with the improved feed ratio, the best since February 1947, adds up to increasingly larger supplies of milk for Indiana.

Bright Future for North Dakota

Much the same development is forecast for North Dakota where John Burnahm, Executive Secretary for the North Dakota Dairy Industries Association, visualizes,

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"a bright dairy future in North Dakota." Although most of Mr. Burnahm's prognostications relate to the next few years instead of the next few months he does report that production in the State is remaining steady at present. A rather surprising fact, and one that substantiates the idea of a promising future for North Dakota, is the large amount of milk that is imported in the State today. Mr. Burnahm places the figure at somewhere between 25 and 50 per cent. He estimates that Minnesota milk supplied to dairies in Fargo, Grand Forks, Wahpeton, Williston Valley City and other centers of population probably accounts for a third of the fluid milk consumed in the State.

Future for North Dakota

Dakota farms produce large quantities of farm-separated cream, North Dakota turned out 50 million pounds of butter last year, but there are not enough large dairies near the cities to supply bottling milk. As far as the dairy situation goes, Mr. Burnahm points out that his State is primarily a grain and beef area where farmers did extremely well during the war years. "The farmer who just milked a few cows did well enough without his dairy and the tiresome dairy chores." Recently, however, a new type of dairyman is making a place for himself in the prairie state. "This man wants excellent grade or purebred dairy cattle," the Secretary declares. He uses a milking machine and in some cases a milking parlor. He believes in good dairy cattle, good management, and the thesis that farm security lies in a diversification built on livestock, chiefly the dairy cow."

The optimistic sentiment on production is reinforced by word from other States. Illinois dealers are sufficiently encouraged to write, "Production trends are fairly steady now. We expect something of an increase with the low cost of feed." New England reports, "The outlook in the New England area is for normal production during the next few months." Some New England officials, seeing lower milk prices in the wake of lower feed costs are urging farmers to give their cows the best of care in order to meet the anticipated demand for milk that will accompany a lower price. Colorado says that production is increasing out there in the mountain State and that local Health Departments and the State Department of Public Health, with the cooperation of milk distributors, are constantly setting up more Grade A producers.

South Faces Shortage

Localities in the South are apparently the regions of short supply. Information from Baltimore indicates that the city is importing better than one hundred thousand pounds a day from out of State. About thirty thousand pounds a day are brought in from New York and Pennsylvania to satisfy class I needs while thirty-five thousand pounds are brought in from other sources for Class II uses. There does not appear to be any likelihood of immediate change in the Maryland situation although production conditions are becoming more favorable. Biggest headache in Maryland and adjoining States has been the competition from beef. Higher milk prices are checking the number of dairy cattle going to the butchers, however, and dairymen in the State are looking for improved production. Farmers supplying the Baltimore market are getting $6.43 a hundredweight for Class I milk at present.

> The highest price of milk in relation to earnings of factory workers occurred in 1917 and the lowest in 1945, according to E. E. Vial, economist with the Milk Dealers' Association of Metropolitan New York. The long time trend, Mr. Vial says, has been for milk prices to decline in relation to earnings.

St. Louis will probably be short of milk. This is not a new experience for the river city, they have been short for several years. Texas, with special reference to the Dallas area, reports inadequate supplies. Babies will not go hungry but milk will have to be shipped in. The situation is a little clouded by charge and counter charge but the general picture is a short supply any way it is figured.

The U. S. Department of Agriculture, from the Secretary on down, looks for an overall increase in supply. The amount of increase will vary from market to market, but prospects are for greater supplies ranging from 3 or 4 per cent in some markets to 9 and 10 per cent in others. Indeed, the report may have been colored by a sudden switch from expected famine to mild feast, but during that last few weeks numerous dairymen have resorted to the phrase "milk running out of their ears," to describe the availability of supplies.

Consumption Shows Slight Decline

Consumption shows a slight decline in most markets. It is pretty close to an established fact that the reason is price. USDA have described the fluid consumption as steady to weak. Again this is a situation that can have wide local variation and indeed, can vary within markets. A dealer we talked with last week said that he was having to scratch in order to get enough milk to fill his fluid requirements while another dealer in the same market was separating. So you pays your money, and you takes your choice.

Massachusetts advises that, "due to price resistance the consumption of milk has dropped slightly. However, we do not anticipate appreciable drops unless economic conditions take a decided turn for the worse." Baltimore reports a slight drop as compared with a year ago. Last year sales of milk in that city were approximately 360,000 quarts a day while this year during the same period total fluid consumption is off by about 14,000 quarts. Officials of the Maryland Cooperative Milk Producers say that the reason lies with the weather rather than the price. Last year's meteorlogical environment was more conducive to large scale milk use than it has been this year.

Both Indiana and Illinois concur with the experience of the Eastern and Southeastern States. A Chicago firm declares, "Consumption is a little down under a year ago on milk and a little more so on cream." The Indiana report says "Bottle milk sales are definitely down for this period of the year, and sales of cheese etc. are surprisingly low when comparing the high cost of meat. Ice cream sales are not good . . ."

Encouragement from Colorado

Colorado sees things in a little better light and reports that milk consumption is on a slight upward trend in the State's larger cities. North Dakota likewise reports consumption steady with every prospect of an increase. There was a heavy wartime loss of population to defense plants, which according to the Secretary of the North Dakota Dairy Industries Association, has been regained, most of it in the form of young families with small children.

Connecticut and New York present contradictions. In the Nutmeg State consumption is up 1 per cent over the same period, September, of last year. New York City on the other hand is down 3 per cent. New York City dealers have been having their troubles. Between price investigations, a highly vocal consumer's group, and union contracts dealers have had their hands full.

If one looks at the fluid milk industry as a whole, however disconcerting certain local problems may be, one senses a fairly firm market with a slight tinge of optimism. Despite the fact that total milk production for the year up to November 1 is 3.3 billion pounds less than last year lower feed costs, falling grain prices presage a more abundant supply in the near future. Consumption is slightly off when one looks at it alongside the rapid price increases of the last twelve months it appears to have held up remarkably well. There will be price revisions during the winter and many areas will find supplys tight but by and large the industry ought to come through the next few months in good shape.

XUM

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A TRIP with the EDITOR to MICHAEL'S DAIRY

WE WENT up to New London, Connecticut last month and spent a half a day visiting with Michael Buscette who owns and operates Michael's Dairy. We saw the United States Coast Guard Academy with the color guard drawn up for "retreat." We saw the Navy's famous training tank where submariners are schooled in the technique of escaping from a submarine stuck on the bottom. We saw the wide estuary of the Thames where the Yales and Harvards meet for their famous boat race. But most of all we saw a milk plant.

It's going to be a little bit difficult to tell you about this establishment of Mike Buscette's. It's going to be difficult because there is so much about the place that is intangible, that is symbolical of everything that the much abused term "free enterprise" means. We came away from Michael's Dairy a pretty subdued editor. We sensed that we had touched upon something fundamental, something strong and vital.

In this part of the twentieth century when titanic, social, political, and economic forces are boiling close to the surface, one hears a great deal about the American Way, about the Free Enterprise System, about "Making America Strong".

There are posters and articles and editorials and movies and radio programs exhorting the citizenry to wave the flag and beat the drum. We get a little tired of it sometimes because it's like giving a man a cream puff when what he wants is red meat.

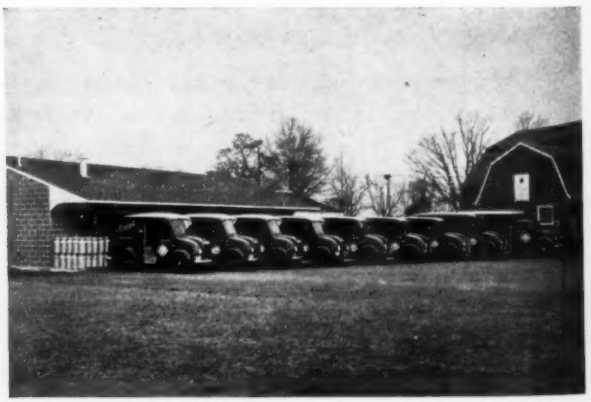
But up there in New London we saw what really makes the nation strong. We saw what happens when a guy who never ceases to learn, who never kicks an idea in the teeth, who recognizes consciously or unconsciously the relationship of his enterprise to the society that sustains it—we saw what happens when a man like that rolls up his sleeves and goes to work.

Mike Buscette processes five thousand quarts of milk a day. He has eleven trucks, nine routes, and a plant that will knock out your dairyman's eye. Seventeen years ago, when bankers were jumping out of windows and the collapse of the economic world was expected hourly, with no truck, no plant, no customers, Mr. Buscette started in the milk business backed by a capital fund that consisted of one Chrysler convertible and exactly twenty-eight bucks in cash.

Trade in Trucks Every Four Years

The plant is not a large one. It is situated on flat land close to a point where the terrain begins to slope down to the River. There is a large red barn,

First Michael's Plant was originally a carriage shed. While the new plant, shown at right, was literally being built around and over it the old plant remained in operation.



Some idea of the sparkling appearance and pleasant surroundings of Michael's dairy can be gained from this picture. Note the overhanging roof and low loading platform.

As business expanded, the dairy's fleet grew from this single unit to eleven well maintained trucks.

formerly a stable, that is used for a garage. The place is not heated and as Mr. Buscette observed, "You could throw a cat through it.", but the trucks that were lined up in there were as clean and trim as a freshly laundered shirt. The trucks are washed once a week. Once a month they are lubricated, tires and points checked, and other mechanical details inspected. The fleet is traded in every four years. Mr. Buscette has found that by following that schedule repairs are kept to a minimum and it is not necessary to have a mechanic. We asked him who did the lubricating. "I do", he said.

The processing plant is kitty-corner from the garage just across the driveway. It is a white building made of cement blocks and wood with an office and routemen's room on one end. A loading platform runs the length of the main part of the plant. There are two doors at either end of the platform that lead to the washing room which in turn has two doors that lead to pasteurizing room. The three, platform, washing room, and pasteurizing room are parallel. The boiler room is an extension of the pasteurizing room, separated, of course, by a partition.

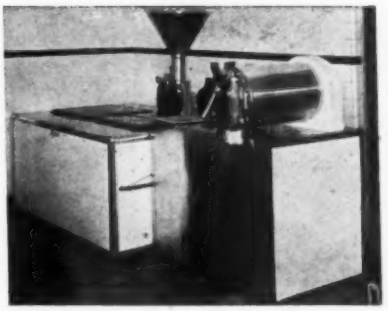
The most immediate thing about the plant that impressed us was the housekeeping. The walls were white tile that changed to tan about four feet from the floor. They were absolutely spotless. The equipment, naturally, was above reproach. What told the story, however, were windows; they were wide open and there wasn't a screen in the place. The health inspector's report remarks on that subject, "No screens, no flies". There weren't any either. As a matter of record, on the inspector's score card Michael's graded 52 points out of a possible 52, It is the only plant in Connecticut to achieve such a record. Mr. Buscette didn't tell us that, we dug it up. It is a state of affairs that offers some clue to the manner in which one goes from zero to five thousand quarts.

From an operational point of view the plant arrangement was both efficient and pleasant. The milk is received at the far end of the platform and moves through the clarifyer to the pasteurizing vats in the accepted manner. By means of compact arrangement the total sanitary piping in use amounts to eighty-four feet. Operation of the pasteurizing room is not hampered by this compactness, there is plenty of room in which to move. Indeed handiness of the equipment adds rather than detracts from the processing procedure.

Loading in Fifteen Minutes

Mr. Buscette has developed a good system of loading the trucks in the morning. He uses dollies generally loaded five crates high, ten crates to a dolly. Drivers leave their orders for the following day each morning before they go out. There is a duplicating machine in the washing room and the driver fills out his order in duplicate, one copy goes to the office the other is retained by the plant men and is placed on the driver's load in the cold room. Each truck's order has a particular spot allocated to it in the cold room and each truck has a specific place assigned to it on the loading platform. The space in the cold room and the place at the loading platform are never changed.

In the morning the drivers get their trucks backed up to the platform at 5:45.



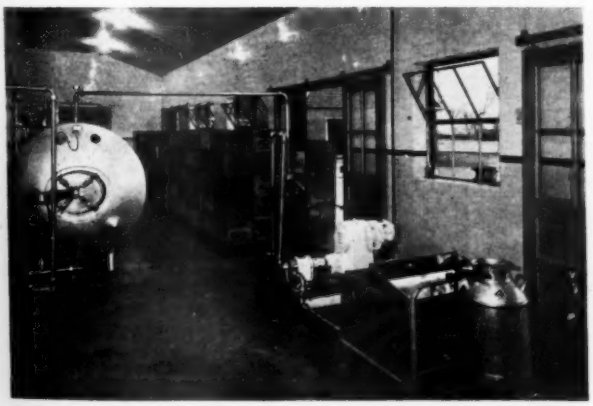
Characteristic of Michael's is the small but high grade ice cream operation that solves the surplus problem.

One man has the keys to the cold room. He opens the door and starts the dollies rolling toward their respective trucks according to the way the dollies are lined up in the cold room. The drivers in the meantime have taken up their stations, each on the platform behind his own truck. If truck No. 8 is at the end of the line its load is nearest the door in the cold room and consequently the first out. The cold room man pushes the loaded dollies to the driver of No. 1 truck who pushes it on to No. 2 who pushes it on to No. 3 and so on down to No. 8. When all of No. 8's load has arrived each man including No. 8 moves up one truck. No loading into the trucks is done until all of the loads are on the platform in back of the proper truck. As a result of the moving up phase, at the No. 1 truck the men are very close together and the dollies are moved without a man taking a step. When all the dollies are spotted then the men load their trucks. The usual load is about 45 cases and the trucks are away from the platform and on their respective routes fifteen minutes after the cold room door was first open.

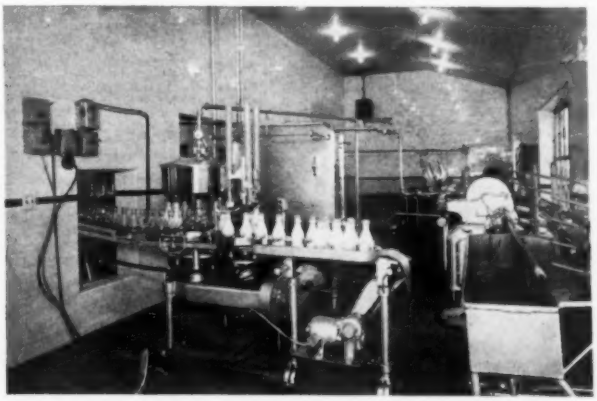
Dollies, Trucks Must Be Spotted

The secret of the system is in spotting the dollies in the cold room, in lining up the trucks according to plan, and holding up the actual loading of the trucks until all dollies are in position. The men must

(Please turn to Page 81)



Washing and receiving room shows the use of dollies loaded five crates high, minimum piping, dry floors, and the windows without screens.



The pasteurizing room is compact but not congested. The light spots on the walls are not blemishes, they are the reflection of the lights.

TO FIGHT POLITICAL ATTACKS

Milk Industry Foundation Convention Urges Local and National Public Relations as Counter Blow Against Public Misunderstanding

UNANIMOUSLY passing a resolution deploring unjustified attacks aimed at arousing consumer resentment against milk, members of the Milk Industry Foundation ended the 41st Annual Convention in Atlantic City, by urging more intensified local and national public relations activities.

All officers were re-elected. F. H. Kullman, Jr. of Chicago as President, T. Kline Hamilton as Vice President and E. N. Brawner, Treasurer. One new director was elected, Raymond Wise of National Dairy Products Corporation, Chicago to succeed E. E. Stewart of New York whose term expired.

"It is an unfortunate spectacle to see milk booted around again as a political football", President Kullman said in his opening address.

"More than 60 million quarts of fresh milk and cream are being distributed every day to American consumers by our industry at prices that have gone up less than almost any other major food product. All anyone has to do is to look at the U. S. government's cost of living index figures and see how prices of all foods have risen more than 116 percent above the pre-war 1935-1939 averages while home delivered milk is only up 85 percent.

"The milk industry is one of the most competitive of businesses with 85 percent of its sales income going directly back into the hands of farmers and labor. Despite the high costs involved in milk supply and distribution consumers are getting their milk at reasonable prices. The efficiency of the fluid milk distributing industry in this country is such that representatives of service industries throughout the world come here to study our operations as a model.

"Consumers have been misled about milk costs and the distributor being in the minority is the scapegoat of inflationary conditions beyond his control."

Representatives of three leading dairy organizations are urging imposition of a flat ban on the imitation of butter through the commercial manufacture or sale of oleomargarine colored yellow in semblance of butter, Charles W. Holman, Secretary of the National Cooperative Milk Producers Federation of Washington, D. C., told the Convention. Such a ban, he said, would enable Congress and the state legislatures to remove all taxes and license fees now imposed on the butter substitute to protect consumers against fraudulent sales.

Turn milk delivery over to the Government? Not with any saving to the Nation's homemakers, Owen M. Richards, manager of the American Dairy Association, said in a talk.

Mr. Richards pointed out that "the Government charges 11 cents to deliver a two pound package by parcel post within the smallest radius." Postal charges do not include equipment, processing, inspection, packaging, cleaning and other charges.

CHOCOLATE POPULAR IN CANADA

Canadian dairies are building up the sale of chocolate drink. Figures recently released show a steady increase over previous years. In July, at the height of the season, chocolate dairy drink sales amounted to 1,187,700 as against 1,177,200 quarts sold in July 1947. The trend is to greater sale of chocolate milk again next year.

Complex problems of fixing milk prices under government regulations are a "headache", Herbert L. Forest, Assistant Director of the Dairy Branch of the U. S. Department of Agriculture told the Convention.

"The purpose of the price fixing program of the Federal government is to bring a certain degree of stability into fluid milk markets. Because this is the purpose, we must not attempt to reflect in fluid milk markets the unstability that has recently characterized the manufactured dairy products markets and particularly the butter market. It is necessary for us to determine insofar as possible the more permanent changes."

Louis Bromfield, noted author and agricultural authority, owner of the 1100 acre Malabar farm in Ohio said "virtually the whole economy of 90 percent of our towns and villages is founded on agriculture or livestock production."

Fluid milk retail prices show a definite indication of leveling off, according to B. H. Bennett, head of Division of Dairy Statistics of the U. S. Department of Agriculture.

Profits of milk companies have been about one-third of a cent a quart—.34 cent to be exact—according to findings of the Indiana University Bureau of Business Research in a new nation-wide study of distribution operations outline by Prof. G. W. Starr.

"The cost of raw milk delivered to the plant along with the wages and salaries of employees took nearly 85 cents (84.95) of each sales dollar", said the Indiana college professor who headed the study, "and expenditures for plant, delivery, and office supplies, advertising and services required 6.76 cents of each dollar of sales.

"Taxes, licenses, insurance and depreciation accounted for 3.47 cents of each dollar received by the milk distributors. Bottles and other containers cost 3.05 cents for each dollar of product sold. Operating cost totaled 98.23 cents, leaving an operating profit of 1.77 cents for each dollar of sales.

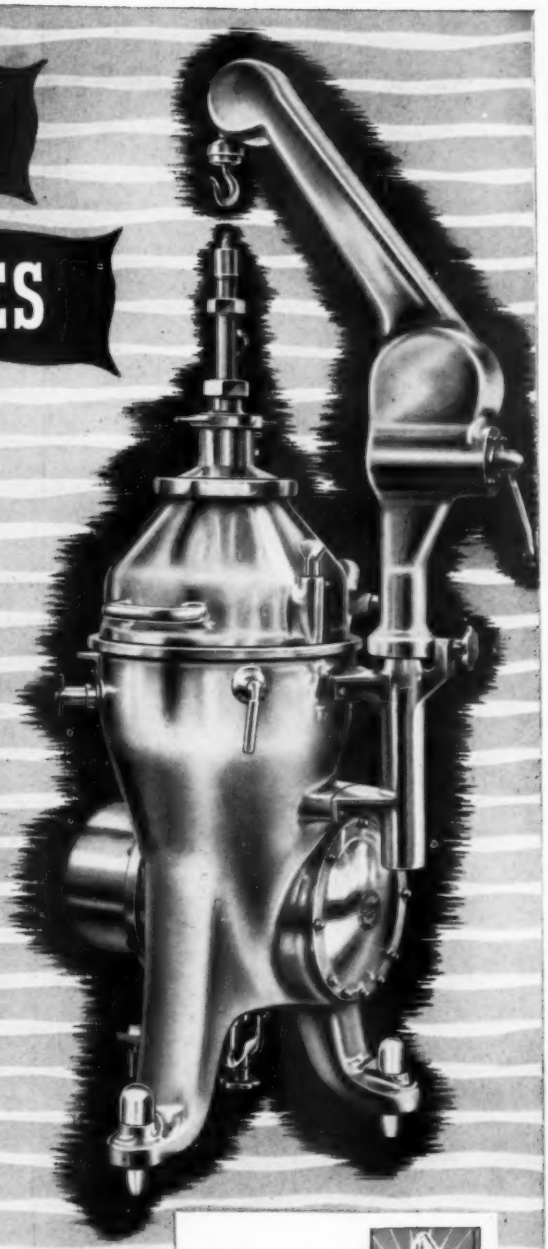
"The study was based on reports to the University by 300 distributors with sales of $1,020,647,074 in 1947 from 39 states, the District of Columbia and Hawaii."

Dr. Charles Glen King of the Nutrition Foundation told dairy industry scientists that "in surveying the current food supply balanced against the food needs in the U. S., the most crucial single nutrient is thought to be calcium. Milk is acknowledged as the food of first choice both in cost and efficiency to meet the need for calcium."

Among unusual features of the Convention were the Public Relations presentation "Meet Your Public", the round table breakfasts, the sectional meetings covering all branches of the fluid milk industry, the advertising contest exhibits and the unique ladies luncheon where a make-up artist glamourized two volunteers to the great enjoyment of the audience of visiting ladies.

Col. B. F. Castle, Executive Director of the Foundation said, "it is the most informative convention we ever held. It should help us secure a big increase in membership."

IT'S THRIFTY TO BUY SHARPLES



LESS SEAL WEAR—Flexible one-piece seals at inlet and outlet points are moulded of special wear-resisting material which is little affected by heat or butter fat.

LESS NOZZLE WEAR—Hardened and polished stainless steel inlet and outlet nozzles and sleeves retain a smooth surface over long periods, which further reduces seal wear.

LESS LEAKAGE OF PRODUCT—Better wearing qualities of seals and nozzles, together with absence of pressure or check valves, minimizes loss of product by leakage.

LESS WEAR ON GEARS—Direct motor drive without clutch enables accurate and permanent alignment of gears; materially reduces contamination of lubricating oil.

For further details write for Bulletin #1232

The SHARPLES CORPORATION

Presur-Seald SEPARATORS and CLARIFIERS

Dairy Equipment Division

EXECUTIVE OFFICES AND FACTORY, 2300 WESTMORELAND ST., PHILADELPHIA 40, PA.

New York 17, N. Y. 501 Fifth Avenue — Chicago 4, Ill. 80 Jackson Boulevard — Boston 10, Mass. 230 Congress Street — San Francisco 5, Cal. 686 Howard Street — Cleveland 15, Ohio 453 Hippodrome Annex Bldg.

TODAY'S ADVERTISING TRENDS

By **ROY H. PARK**

Agricultural Advertising & Research, Inc.

"Today's Advertising Trends and the Consumer." The main points can be summed up in just two short sentences:

1. Advertising trends are up. Advertising is bigger and trickier and more expensive than ever before. In fact advertising budgets this year set a new all time record and are more than twice as much as they were in 1940.

2. The consumer is beginning to put a lock on his pocketbook. No longer will he rush in to buy today at any price on the belief that he might not be able to get it tomorrow.

It might be interesting to go back of these two facts and take a look at things.

First, let's take a good look at the consumer, 1948 model—the man who keeps you in business directly, and indirectly keeps a lot of us going. Well, there are close to 150,000,000 of them already here or else on the way.

Right now—and for the past few years—we as consumers have been eating better than ever before in our history. For instance, this year we will consume an average of 390 pounds of fluid milk and cream, which is 50 pounds more or an increase of about 15 percent over the 1935-39 base years. It is down, however, from a high point of 433 pounds in 1945, 421 pounds in 1946, and 401 pounds in 1947. This means that in the consumption of fluid milk and cream this is the third year that the trend has been running the wrong way.

Butter Consumption Down

Butter consumption has been going downhill since 1940 when the average consumer used almost 17 pounds of butter a year. Today the average person consumes only 10 pounds of butter a year. And, of course, it is expected to go lower because from here on out butter may not enjoy its traditional umbrella of legislative protection in the way of taxes on competing products.

Right now, I suppose, ice cream is really being hit worst of all. During the 1925 and 1929 period we averaged eating in the form of ice cream an equivalent of about 23 pounds of milk a year. This went up by only one pound over a period of 10 years and in 1935-39 was only about 24 pounds. It went to 39 pounds in 1942, dropped back in '43 to 29.0 and in '44 to 31.1, but began increasing again, and in 1946 reached 55.2 pounds of milk per capita consumed in the form of ice cream. In 1947, it was 49 pounds; this year it will be 45, and indications are that it will drop in 1949.

By and large the consumer is eating better today than ever in history. I am using "today" to mean a span of the last few years. He also is paying a larger percentage of his total income for food. Today, 28 percent of his total pay check goes for food, compared to 23 percent pre-war. This, mind you, is figured in terms of his take-home pay, after taxes have been deducted. And those taxes take enough out of the pay check of a man with a wife to pay for the food of one other person. In other words, when a young married couple sit down to the table to eat, even if he is making only 50 dollars a week, they have right with them at every meal an unseen guest in the person of the tax collector.

I might say here, that since 1944, the percentage of disposable income spent for food—that's the government's way of saying after taxes—has climbed year after year. It was 24% in 1945, 27% in 1946, and 28% in 1947 and for the first half of 1948.

Even so, the amount of money left over for the luxuries of life—dairy products are definite necessities—has appreciably increased over the past few years. In 1938, just 10 years ago, the average per capita income in North Carolina was $289; five years later, just about the time I left to go to New York State, it jumped to a little over $500, and it has climbed every year since until in 1947 it was almost $900. This was lower than the national average of over $1,300 this past year, but we must keep in mind that North Carolina is a predominantly rural state and that a lot of the income doesn't show up in the statistics for it is in the form of good living and good food right on the farm.

Consumers Are Apprehensive

But even if consumers are doing well, they are still apprehensive. They see a lot of things that they want and can now buy. And they have learned that in many lines the stuff is backing up on the dealer's floors and they are once more beginning to shop. In addition, they are faced with higher prices for just about everything. Automobiles for instance, are up more than twice what they were before the war . . . and that doesn't include the tips . . . clothing is sky-high, and the poor old housewife knows that when she takes her $20 bill down to the super-market and buys the groceries for the week, there just isn't much left. So she's got to get mad at somebody and the food supplier is the easiest target because food is something she can't do without and is something that she has to go back and buy week after week. She can pay $15 or $20 for a hat and she'll wear it for a year—off and on—and a lot of people will tell her how nice it is and she'll get a lot of self-satisfaction and ego stimulation out of it. But food is something that, once it is eaten, is gone, and all that remains is a food bill to pay at a later date.

Here I am reminded of a man who was recently raising the devil at a milk hearing in New York State because the price of milk was going up one cent a quart. That would make milk 23 cents a quart in Ithaca, where I live. Yet, after that hearing was over, he walked right into a tavern and bought a bottle of beer which sells at the rate of 53 1/3 cents a quart and he smacked his lips and thoroughly enjoyed it. Neither did he seem to mind paying at the rate of 26⅔ cents a quart for Coca-Cola—but any price to him would have been too high for a glass of good, nourishing milk.

The difference, as I see it, is that psychologically, the man felt he had to have milk for his family. It was a daily requirement. He figured he could forego the beer and the Coca-Cola. But he usually doesn't.

It's time now to go back to the first part of my talk—that portion dealing with advertising. I purposely wanted us to put right out on the table some fundamental facts and a little clearer focus on the people we must sell before we started talking about how to sell them.

More Money Spent on Ads

In my opening statement, I said that advertising trends are up and that more money will be spent on ads this year than

ever before. This means that with more ads and a greater number of advertising media, there is a keener competition for the attention of the consumer. For example:

1. In 1940, there were about 5,000 magazines in this country. Today there are 7,346. All told there are 20,000 different publications listed in the Ayer directory and just about all of them want to carry some advertising.

2. In 1940, we had in this country about 800 radio stations. Today we have 2,000, and new stations are being erected daily. Not all of them will be able to stay in business, for I don't see how business can support them all. Some towns that should have one good radio station now have two or three —and the consumer can listen to only one at a time.

3. By the end of this year there will be 65 television stations operating in this country—and a lot of smart advertisers are already putting their money back of them.

4. Finally, our daily and weekly newspapers are now carrying more space than at any previous time in history. There is more competition for readership.

The first problem is what to advertise in and how much to spend. These are questions that require careful analysis based on local conditions.

Advertising copy generally is harder-hitting. There are bigger claims and bigger prizes. It used to be that you could get attention by putting your name up in big letters on a barn or on a truck. Today, if you want attention, you must strive for the unusual. Even the radio programs are having to buy their listeners with big give-away prizes.

And I think that once again we will begin to evaluate advertising in its proper terms. In the main, its functions is to create a desire but it can't sell unless the product is readily available. It is a door opener for your salesman—a means for him to get new dealer outlets and to get the business through personal calls.

For the past few years, the salesman has been the forgotten man. He has taken some other job in the plant or else he has become an order taker or, in some industries, an allocation expert. He is coming back into his own—and after eight long years, as they say in politics, the man who puts orders on the books is again becoming the "top dog." We know, from experience, that if we can get our route men or salesmen to make the calls—get them to follow a definite program of so many calls per day—that the law of averages will in most cases take care of us. What the advertising should do is build up in the consumer the fact that you have a good product, that you are a good company to deal with, and that milk itself is our best food, economical in price when considered from all angles.

●

Heads QM Nutrition Branch

Chicago, Ill.—Dr. George H. Berryman, formerly Commanding Officer and Director of Research of the Surgeon General's Medical Nutrition Laboratory here, has been named head of the Nutrition Branch of the Quartermaster Food and Container Institute for the Armed Forces. Announcement of Dr. Berryman's appointment was made by Dr. Harry L. Fevold, Chief of the Institute's Food Research Division.

As head of the Nutrition Branch, Dr. Berryman will direct basic research on nutritional aspects of foods and rations used by the Armed Forces or procured by the Department of National Defense for feeding programs in other parts of the world.

He received his B. S. degree at the University of Scranton, his M. S. at Pennsylvania State College, and his doctorate at the University of Minnesota (Mayo Foundation). His major subjects were physiologic chemistry and nutrition.

Yes, Mr. Dairy Plant Operator, what a boost in volume and profits that would mean to you!

And you *can* get more top quality milk if *more* of your producers do a good job of killing bacteria. That's where the LO-BAX "PMQ" plan pitches in for you.

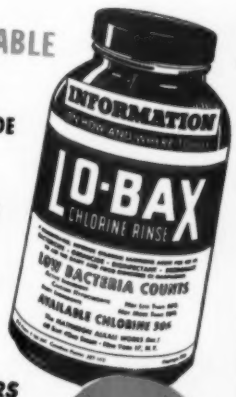
In dozens of ways, the "PMQ" program shows your producers how and why they should use a chlorine rinse consistently. You are given persuasive LO-BAX letters and folders for enclosing with milk checks. You get attractive LO-BAX posters, milk house instruction cards and booklets on milk sanitation—merely by handling LO-BAX. You get *regular* help in LO-BAX farm paper and radio advertising —doubled in intensity this year.

Ask to see what's included in the LO-BAX plan. You'll want the help it can give in raising your profits, in boosting your volume and strengthening your competitive position. Write Mathieson Chemical Corporation, 60 East 42nd Street, New York 17, N. Y.

LO-BAX 50% AVAILABLE CHLORINE

A HIGHLY EFFICIENT CHLORINE BACTERICIDE

- A FAST KILLER
- EASY TO HANDLE AND USE
- STABLE (doesn't lose strength)
- GIVES CLEAR DAIRY RINSE SOLUTIONS
- READILY DISSOLVING
- HARMLESS TO COWS' UDDERS AND MILKERS' HANDS



Mathieson LO-BAX

PMQ PROTECT MILK QUALITY

Lo-Bax . . . Super Nufos . . . HTH-15 . . . Dry Ice . . . Carbonic Gas . . . Ammonia, Anhydrous & Aqua . . . Caustic Soda . . . Soda Ash . . . Bicarbonate of Soda . . . Liquid Chlorine . . . Chlorine Dioxide . . . PH-Plus . . . Sodium Chlorite Products . . . Sodium Methylate

EDITORIALLY SPEAKING . .

Oleo and The Butter Market

THE perennial controversy over oleo colored in imitation of butter will be renewed when the Eighty-first Congress convenes in January. We will not venture a prediction on the outcome of the issue at the hands of the new House and Senate, but we do not entertain any great hope that the status quo will be retained. Furthermore, should the new legislative bodies take it upon themselves to remove all restrictions on the sale of oleomargerine other than the usual sanitary and quality regulations that govern food products, we do not feel that it would be a complete calamity.

Over a period of time we have been coming to the conclusion that in diverting its energies to protect butter from oleo competition through legal fences, justifiable though they may be, the butter industry and the dairy industry as a whole is doing itself more harm than good.

The reason that butter is manufactured in the United States or anywhere else, excepting possibly the Soviet Union, is because it is a commodity that commands a wide market and will return the manufacturer a profit for his labors. Butter is not made because people like to make butter for the sake of making butter.

True, it is sometimes made at little or no immediate profit but as a means of using surplus milk that otherwise would be animal food or a total loss. But fundamentally butter is manufactured because it is a money-maker. If our reasoning is correct, then it follows that above all else the butter industry must have a market in which to dispose of its product. To lose that market is to lose the industry.

There are few persons who would quarrel with the statement that in the field of marketing products on a large scale, in the realm of merchandising along Paul Bunyan lines, American salesmen lead the world. The significant point in this epic of selling is the fact that most of the markets were created. Somebody did a job of selling. Somebody was out ringing doorbells, hanging up posters, talking over the radio, buying space in the newspapers and magazines. Somebody was delivering himself of a sales story.

The second significant characteristic of the American sales picture is that there is hardly a single product on the market that enjoys or suffers from a monopoly. Competition is the unyielding taskmaster that makes people go out and sell.

Oleo has come a long way since the first World War. We would be guilty of inexcusable folly if we failed to realize that truth. One of the surest techniques of taking a licking is to underestimate the caliber of the opposition. Oleo is *the* competition as far as butter is concerned.

All of the arguments from the dairy industry regarding butter boil down to the thesis that oleo, when colored yellow by artificial means, offers unfair competition. A spread must have eye appeal as well as taste appeal and the yellow, traditionally associated with butter, is a major requirement of a fat spread if it is to be successful in the American market.

In butter the yellow color is a natural characteristic; in oleo it is artificial. On the basis of time and nature butter can make out a plausable case for the yellow color as its own particular prerogative. But even though the courts upheld the argument it would be an empty victory, because it would not sell one single pound of butter! Until it is possible to prohibit the sale and the *serving* of oleo colored in imitation of butter people will buy whichever product they have been convinced is the best buy.

Ever since oleo came on the market it has been subject to a tax program designed to prevent its sale in imitation of butter. Yet in spite of that program oleo has edged its way into the field until today it commands the largest market in its history.

There are three main developments that account for the rise in oleo consumption. The first is the improvement in the quality and merchandising of oleo. The second is the difference in price between butter and oleo. And the third is the fact that the dairy industry has been wasting its energies trying to restrict competition by legislative means, when the real avenue of attack was *and still is* to beat the living daylights out of the competition by superior merchandising.

Here is an episode which illustrates what we are driving at: A friend of ours, the chairman of the Department of Business Administration at an eastern University buys four pounds of uncolored oleo each week. We asked him why he bought the oleo instead of butter. "In the first place, it's cheaper," he said. "In the second place I've gotten so used to it that I can't tell it from butter. And in the third place it is just as good nutritionally as butter. Until someone can convince me that butter is a better buy than oleo I'm going to keep on buying oleo."

What we are getting at is simply this: The public wants a yellow fat spread for its bread. Oleo colored yellow is acceptable. Because it is markedly cheaper, a large portion of the buying public is using oleo. They are not interested in whether oleo colored yellow is infringing on something that logically belongs to butter. They are not even interested in being protected against oleo sold as butter—largely because they don't believe it. What they are interested in—and the the only thing they are interested in—is a cheap, palatable yellow spread for their bread.

There are two courses open to the butter industry, and therefore to the dairy industry. We can fight oleo to the last ditch. We can fight in the courts and in the legislatures. And we may possibly win a continuation of restrictions. But it will be an endless battle and it will call for the expenditure of large sums of money for public relations purposes. Or we can retire from that phase of the conflict, making tremendous capital out of the reasons for doing so, and join the battle anew where it must eventually be joined—namely in the market place.

We do not believe that the first course, even though successful, will regain the market that has been lost. We *do* believe that butter is a product superior in every way to oleo. We believe that butter can lick the vegetable juice right out of oleo in any kind of competition, fair or unfair, if given the chance.

We believe that only by aggressive salesmanship, only by enlightened and dynamic merchandising, can this be accomplished. It will cost money to do it. It will cost a lot more money not to do it. We think that the time has come to stop arguing with the umpire over the ringers on the other team. We think that the time has come to bust a couple of long ones right out of the park.

YOUR friendliness and patronage have been an important contribution to our success and well being . . .

★

May we express our thanks to you as we wish you a good old-fashioned Merry Christmas and for the New Year abundant good health, prosperity and happiness

THE URNER-BARRY COMPANY

FRANK DALY — SHEFFIELD FARMS

Portrait of a Dairyman

IT WAS IN THE vast, rolling hills around Rome and Utica in Up-state New York that General Herkimer turned back the British thrust on Albany when he crushed St. Ledger's Indians and regulars at the bloody battle of Oriskany one hundred and seventy-one years ago. It's dairy country today. The pastures are checkered with fine herds of holstiens and on the high road the tank trucks are balling the jack, southbound for the metropolitan area.

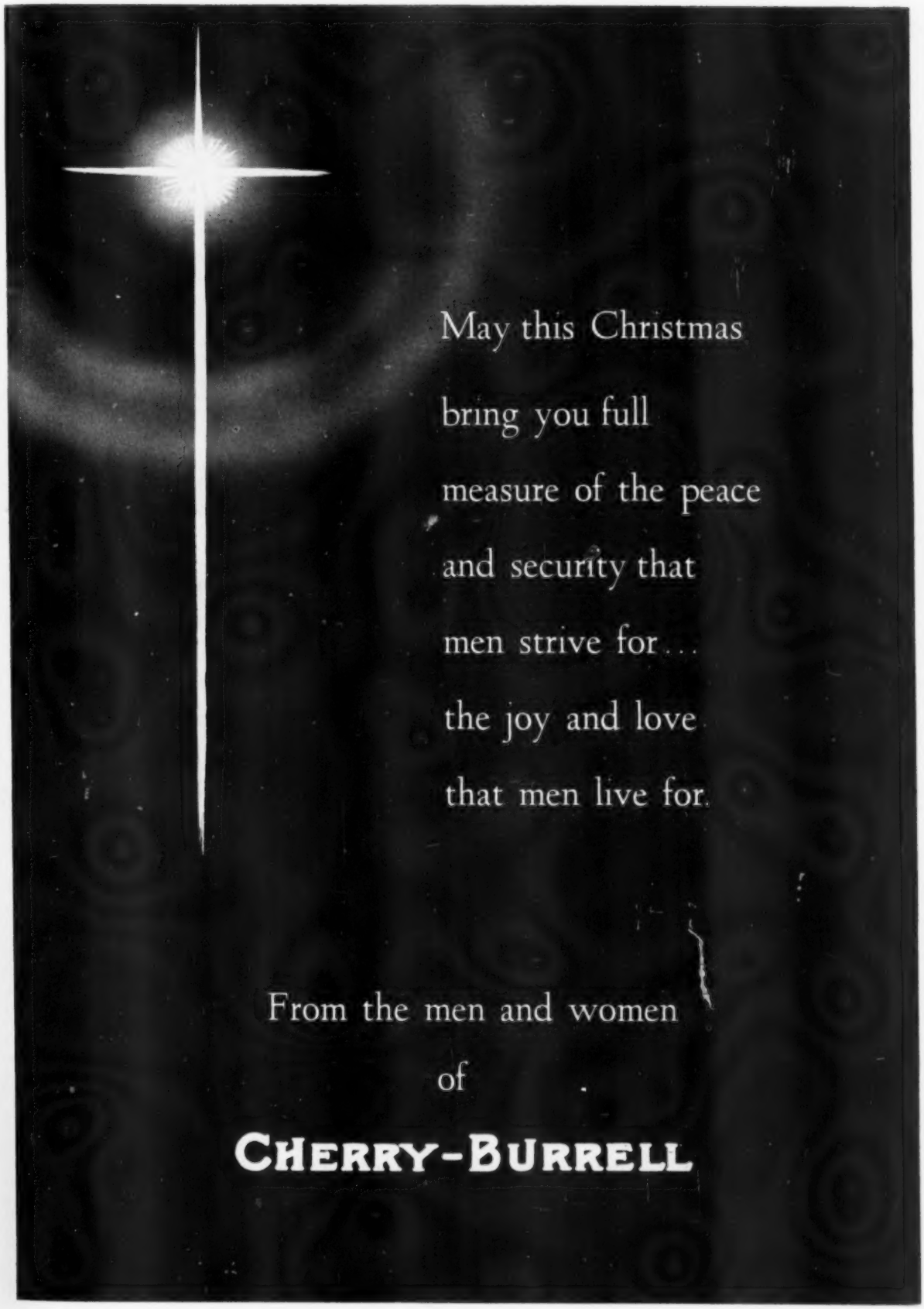
Out of this pleasant country came Frank Daly, general superintendent of country plants for New York City's Sheffield Farms. He grew up on a small dairy farm near the town of Danby in Tompkins County. Tompkins County means Cornell University, the Finger Lakes, and milk.

It's a long haul from country boy in a country town to General Superintendent of Country Plants in an organization the size of Sheffield's. There were many stops along the way. There was the apprenticeship in butter making at the Crystal Fountain Creamery in Slaterville Springs. There was the jump to manager of the Oswego butter plant of the Standard Butter Company and stint in Jersey City with the Howell Milk and Cream Company. There were the years back in the dairy country again as manager of the Heim Milk Products plant and later as manager of the Breakstone Brothers plant in Truxton, New York.

Woodrow Wilson had just been elected President of the United States when Mr. Daly went to work for Sheffield Farms. For thirty-five years he has had a prominent finger in the country plant pie. Hardly an establishment in the extensive Sheffield up-state operation does not bear the stamp of Frank Daly; plant manager, district superintendent and finally top dog as general superintendent of country plants.

Sheffield News remarked recently, "To Frank Daly, the milk business is his life, and to those who have learned to know him, the milk business is Frank Daly".

That just about sums it up, doesn't it—a man and an industry, an industry and a man. It takes a lot of both to make the wheels turn.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bring you full
measure of the peace
and security that
men strive for...
the joy and love
that men live for.
From the men and women
of
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the "EZE" way!

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MILK SHORTAGE IN TEXAS

By **JIM TAGGART**

THE WORST MILK SHORTAGE in the history of the United States as well as Dallas will be felt this winter, predicts Dr. J. W. Bass, director of public health, as milk distributors already began to feel the pinch of a milk shortage in Dallas.

High prices of beef were blamed by the health officer for the shortage existing to some extent now and he said Dallas milk distributors have spread out over 25 counties in attempts to find milk sources ample to supply local needs. Whole milk from Missouri, Oklahoma and Wisconsin is being shipped into Dallas now to supplement distributors' local supply, Bass said. He has mailed letters to distributors and ice cream manufacturers in Dallas, listing four approved out of state milk sources.

Both Dr. Bass and milk distributors said that milk prices, already at a peak, will soar even higher this winter if Dallas milk men are to supply the demands for milk in their home area.

"There will not be near enough milk this winter in the United States and we will be hit probably with the worst milk shortage in history," Dr. Bass said. "Prices will be higher because of the increased demands for milk. Milk distributors already are out-bidding each other for milk sources, driving prices higher and higher."

One milk distributor said that milk men from other milksheds are entering the Dallas area and offering producers higher prices for milk which prices local distributors have to meet in order to maintain their supply of milk. As a producer is lured away by higher prices from a Dallas distributor to an outside distributor or another local one, the firm which lost its supply is temporarily short on milk and has to purchase from other states.

Thus, Dr. Bass explained the shipment of whole milk to Dallas from out of the state.

The losing firm then is forced to raise its price to meet its competitors' offer to the producer in order to conserve the source.

"Farmers are selling dry cows for beef because of high meat prices instead of holding them until they can begin producing again," Bass explained.

Dallas milk distributors are searching a large area in the Dallas milkshed for milk sources, Bass said. They are spreading their search from the Oklahoma line on the north, Williamson County on the South, and from Weatherford on the west to Mount Pleasant on the east. Although dairies supplying milk to Dallas have increased in number from approximately 800 to more than 1000 in the past year, the milk supply has not kept up proportionately with the demand, the official said.

Figures for July showed Dallasites using milk at an average of 62,595 gallons per day, while receipts of milk in Dallas stood at approximately 68,000 gallons per day. This, Bass said, shows more milk is being received than is being sold, but the problem lies in even supply to each distributor. July consumption was above that of last winter.

RENOVATE OLD PASTURES

It pays to renovate old permanent pastures, says Ralph Donaldson, extension agronomist at the University of Massachusetts. In two-year tests on renovated and unrenovated pastures, Federal Department of Agriculture experiments showed 51 per cent more milk per acre, per year, on the renovated pasture.

The whole milk shipped into Dallas is thoroughly inspected, the health officer said. It is shipped in refrigerated trucks or railroad cars and the producers must be rated by the U. S. Public Health Service. The milk must be inspected locally upon arrival.

Concentrated skim milk is not allowed for sale in Dallas under city ordinances although its use may be allowed in some milk products. Concentrated milk, combined with fresh whole milk locally becomes recombined milk, the sale of which was allowed in Dallas two years ago. The sale of such products is not now allowed, nor was it allowed last winter.

Bass estimated the quantity of whole milk shipped to Dallas from other states at around 2,000 gallons per week. The shipments come only when a distributor finds himself short from his own local supply sources.

"With the shortage already being felt in Dallas, we can look for a great shortage this winter," Bass said.

If milk prices continue to go up, "as they seem bound to do," Dr. Bass declares most of the blame can be laid in the lap of the State Health Department in Austin.

In Austin, State Health Officer George W. Cox denies there is a milk shortage in Texas, as contended by Dr. Bass and Dallas distributors. Dr. Cox reached his decision after a conference with health directors from several cities, including Dr. Bass.

"There is only one reason for the increasing prices distributors are having to pay milk producers and that is that demand exceeds supply," Dr. Bass said. Distributors in other cities have to outbid Dallas dairies to get enough milk. Then Dallas distributors have to outbid them. That means only one thing—not enough milk."

Dr. Bass says the State Health Department is standing on technicalities that prevent distributors here and in other cities from going after large supplies of milk in heavy-production states. "Wisconsin and Minnesota are the nation's leading milk-production states and have large milk surpluses which are denied to Texas distributors.

"Milk in these states is rated by the United States Public Health Service," Dr. Bass says, "but the Texas Health Department will not accept the federal rating. It insists that all milk be certified as Grade A by some city health officer. An example of this rule is that the same milk certified as Grade A by the Chicago health officer and then reshipped to Dallas is acceptable to the Texas Health Department."

Heretofore, some milk has been obtained from Missouri from sources inspected by the Dallas health department and certified as Grade A, but even that source has been cut off under the state health department rulings, Mr. Bass says.

"Because of the situation, milk consumers in Texas are paying more per quart for milk than in most other places in the country." Dr. Bass says. "I don't know what consumers are going to have to pay for milk this winter. The price undoubtedly will be higher. All we are asking is to cut the technicalities and red tape. And we want uniform enforcement. We don't want Dallas singled out as the State Health Department seems to be doing."

One suggested solution of the milk shortage is a relaxation of the raw milk rule, states Dr. Bass.

XUM

JOHN BRANDT

C. W. HOLMAN

President of National Cooperative Milk Producers Federation is John Brandt of Land O'Lakes. Executive Secretary of the organization, staunch standard bearer for the American dairy farmer, is able Charles W. Holman.

STORY OF A CO-OP

THEY WERE SEVEN—seven farmers and they went to jail. Their crime was a most serious affair, a hair raising, cold blooded thing. They had banded together to form a co-operative in order to market their milk more effectively. Well that was long ago and far away—on the contrary it was in the State of Ohio in this Land of the Free just exactly twenty-nine years ago.

The co-ops were not born without labor pains. The idea that men might band together for their mutual aid in matters economic was a large thought for a nation that had been nurtured in the traditions of rugged individualism. In California, in New York, in Minnesota, in Illinois cases similar to the Ohio episode developed but the courts refused to convict. Apparently there was something about putting men behind bars for cooperating with each other that stuck in the judicial craw. A few years later the Congress of the United States took a hand in the matter and enacted the Capper-Volstead Act—known as the "Bill of Rights" for farmer cooperatives. It was during this torrid period of jailings, of milk strikes, of farmers struggling bitterly for a voice in the pricing of their products that the National Cooperative Milk Producers Federation emerged.

Born when the battle was at its height, the organization has never been able to shake off the environment of its infancy. Whatever the issue, be it foreign trade or school lunches, if it affects the dairy industry the bright steel of the nations most potent nation-wide farm commodity group is well in the van.

Growth Has Been Rapid

The "scattered group of infant dairy co-ops, defending in the courts their right to bargain for the price of their milk", wasted little time in growing to size. The Federation stands today as an association of 86 local and regional cooperative associations that are owned and operated by more than 425,000 farm families spread over 47 states. And that, to put it in words of one syllable, is some growing.

The primary purpose of a dairy co-op, according to the Federation, is to provide its farmer-owners with services and facilities for handling their milk and to enable them to save money in handling their own products with these facilities. These functions are usually discharged by the local and regional cooperative associations.

The local co-op is a marvel of varied service. It negotiates prices. It carries on quality improvement programs. It may provide breeding services, underwrite quarantine insurance, or run a paint-spray outfit. Some fluid milk co-ops have plants for manufactured dairy products, may bottle their milk and distribute it wholesale. But beyond these everyday tasks there is a larger obligation that inevitably came to rest on the cooperative shoulders. That is the job of informing and representing members on matters that relate to all dairy farmers over the entire United States. It is this phase of cooperative enterprise that is carried out by the National Cooperative Milk Producers Federation.

In a pamphlet published in 1946 the Federation describes its activities. "The day-to-day handling of dairy products," the pamphlet declares," is the job of the member units of the National Cooperative Milk Producers Federation. The job of the Federation itself is to deal with the overall conditions under which these daily operations are carried on, and which therefore indirectly affect the incomes of the dairy farm families. The Federation, in other words, helps to create and maintain a healthy economic atmosphere for the milk producers.

"Thus the Federation concerns itself with legislation, with government policies, with administrative rules and regulations, with tariffs and subsidies, with labor relations, and with numerous other influences which center in Washington or which have nation-wide application."

Variety of Activities

To translate these general concerns into practical operation means that the Federation staff performs a variety of duties. Its headquarters are in Washington where Federation Secretary Charles W. Holman is a familiar figure on Capitol Hill. Daily contact is maintained with Congress when it is in session. Federation representatives prepare and present testimony before Congressional committees on bills which concern dairy farmers and their families and also draft, in cooperation with legislators, proposed laws and amendments. Statistics on dairy products, fats and oils, feedstuffs, and other farm products, are compiled for the use of the Federation, its members and others who require accurate information. The Federbovine diseases, rural health, socialized medicine, wage-hour legislation, price control, school lunches, farm credit, and food allotments were some of the other questions upon which the delegates delivered themselves of a collective opinion.

Attitude on Current Issues

Largest present targets for Federation guns are oleomargerine, the Taft-Hartley Act, and international trade agreements. Regarding oleo, the Federation, which has been in a sustained, and to date, successful fight to prevent the sale of oleo colored in imitation of butter, proposed

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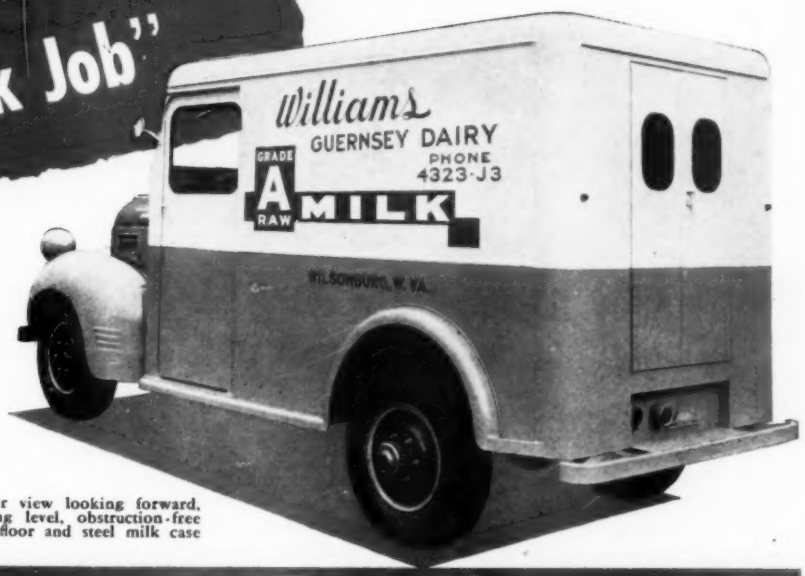

Interior view looking forward, showing level, obstruction-free safety floor and steel milk case rack.

SPECIFICATIONS

SIZE: For 1 ton chassis; 84" x 65", 54" high. For 1½ ton chassis; 96" x 65", 54" high.

FRAMING: Framing and sub-framing all-steel, electrically welded.

FLOOR: Driver's compartment; approx. 42" wide, on same level and integral with loading compartment. Has lidded openings for access to battery and master cylinder. Joined with loading compartment by 1" flange.

Loading compartment; safety floor, with steel racks over round wheel housings to hold standard milk cases.

DOORS: Rear: metal piano hinges, standard windows, rubber bumpers, 34" opening, dust-proof formed-in offset jambs.

Side: sliding type—lock open or closed. Large window openings. Sliding door locks and handles. Roller bearing hangers. Approx. 28" clear opening.

CORNERS: Rear corners of 4" radius, integral with rear panels and door posts. Front roof corners 6".

SKIRTING: 9" at sides.

RUNNING BOARDS: At bottom of skirt from cowl to rear fenders

STEP-WELLS: Safety tread approx. 14" deep, integral with runningboards

FENDERS: Special roll-type, heavy-duty. Replace standard fenders.

REAR BUMPER: 3" channel, slide-under type. Extends 6½"; covered with safety plate; fastened with heavy braces direct to chassis frame.

DOME LIGHT: One, with switch in ceiling behind driver's seat.

ACCESSORIES: Windshield wiper, rear-view mirror, bookshelf on right side of windshield.

PAINT: One color.

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ation is constantly engaged in the study of dairy price and production trends as the basis for determining its policies and recommendations. Through these and other activities the organization carries the ball for the Dairy farmer in the capitol.

The Federation is governed by a Board of Directors elected annually by delegates to the annual convention. The election is based on the traditional cooperative principle of "one member, one vote". The Directors in turn choose the officers of the Federation and an eleven man executive committee. To the officers and the Executive Committee the Directors delegate their power when not in session. Some of the foremost names in the dairy industry have appeared on the roster of Federation officials. Officers elected by the Board of Directors at the close of the Thirty-second Annual Convention in Portland, Washington included John Brandt of Minneapolis and Land O' Lakes; W. P. Davis of Boston, First Vice-president; W. J. Knutzen, Second Vice-president; George W. Slocum, Treasurer; and Charles W. Holman, Secretary.

Member cooperatives of the National Federation handle nearly 19 percent of all the milk produced in the nation. As spokesmen for such a substantial segment of American agriculture Federation staff members carry more than a little weight in Washington legislative and administrative circles. The National Cooperative Milk Producers Federation, the National Grange, the American Farm Bureau Federation, the National Farmers Union, and the National Council of Farmer Cooperatives make up what is commonly referred to as the "big five".

Capper-Volstead Act

The activities of the Federation are varied but their ultimate purpose is to develop legislation and administrative regulation by the Federal government favorable to the dairy farmers. One of the first triumphs of the organization was the enactment of the Capper-Volstead Act in 1922. Another early achievement was the Emergency Tariff Act of 1921 which established import duties on certain oils and fats and on a number of dairy products. Still a third piece of legislation which the NCMPF was instrumental in securing was the Federal Filled Milk Bill. The problem of the Tariff and enforcement of the Filled Milk bill have been constant areas of Federation activity. As recently as 1944 legal battles on filled milk cases have reached the United States Supreme Court.

"Not all of the battles it engaged in can be chalked up as victories," the Federation says. "But even in cases where a clear victory was not achieved the weight of its arguments in countless instances have resulted in compromises which have mitigated what otherwise might have been extremely adverse legislation or unfavorable administrative ruling."

At the recent annual convention the NCMPF expressed itself, through a series of resolutions on thirty-eight different subjects. On the question of a permanent agricultural price program the Federation urged the abandonment of the "purchasing power" parity index in favor of a parity index based on equality of hourly earnings. In addition, the adoption of the principle of a self-supporting agricultural price program which would utilize a surplus holding pool financed by an equalization fee on the first sale of protected commodities, was recommended.

The Federation was *against* the International Wheat Agreement and *for* "some such instrument as the Commodity Credit Corporation. It went on record as favoring soil conservation and "an adequate, highly mobile, well trained, and excellently equipped military establishment." It came out in support of the Marshall Plan and a reduction in the Federal budget. The Columbia River Basin Project and the St. Lawrence Seaway also received the Federation's blessing. Contagious that, "The Federal and State Governments should prohibit the manufacture and sale of oleomargerine colored yellow in imitation and semblance of butter. If this is done, the butter-oleomargerine trade war will be ended. It will then be practical to abolish the taxes, licenses, and fees affecting oleomargerine."

Since its earliest days the NCMPF has been militantly concerned with the tariff. Basic premise of Federation tariff thinking is the assumption that the dairy industry, that bulks so large in the national economy, is overwhelmingly dependent on domestic markets. Competition from foreign products that not only enjoy lower production costs but are not subjected to the high sanitary regulations under which the American industry must operate, the Federation maintains, is unfair. The Geneva Tariff and Trade Agreements consummated in 1947, the Havana Conference which drew up a charter for an International Trade Organization, and the Trade Agreements Act are the most recent challenges to the Federation's protectionist position. Focal point of the attack on these agreements, which, the Federation says, are driving the country "nearer and nearer to a condition of free trade", is the fact that "the power to fix tariffs and to negotiate trade agreements has been delegated by Congress to the President since 1934, and until recently but few safeguards were provided for the exercise of that power". "We do not think it necessary, in order to promote international trade", the Federation says, "for Congress to turn over to the State Department, without adequate reservations, its power and duties with respect to trade agreements." What the Federation is after is a return to the practice wherein all trade agreements are submitted to Congress before becoming effective.

The Taft-Hartley Act

On the Taft-Hartley Act the delegates to the Portland gathering did not beat about the bush. The convention "deplored" the "unfair" attacks made upon the the bill and said, "The act goes far toward re-establishing individual liberties among labor and equal rights for employers. It should be given every chance to work."

In the field of general labor legislation the Federation favors specific action strengthening the anti-trust laws to prohibit labor unions from organizing farmers. It must be made illegal for labor union officers, representatives, and members of the union themselves to make any contract or to combine with any persons to fix prices, allocate customers, or restrict production or distribution of any agricultural products.

The firm growth of the cooperative idea has resulted in the establishment of coops as an important part of our present economy particularly as it relates to agriculture. Nevertheless, the idea is still subject to periodic attacks. The so-called "tax exempt" status of the coops is the current feature of cooperative existence that has drawn fire from other interests.

The crux of the argument is the fact that a tax exempt cooperative pays no income tax upon dividends paid on its capital stock or upon unallocated reserves. The reasoning behind this exemption is based on the theory that these dividends are not dividends in the true sense of the word. They are not profits but represent the margin between what the co-op management anticipated costs would be and what they actually were. The dividends are really a refund. To an outsider or a competitor who sees an organization doing a business that may run into millions of dollars annually and yet does not pay an income tax on what *he* considers profits, the exempt status of the co-ops is a source of irritation.

The coops reiterate their position that their dividends are not profits but are refunds which are taxed through the personal income tax levied against the recipient of the refund. To tax the dividends would be to subject the co-op's patrons to "double taxation."

The Federation is a leader in the fight to preserve the present tax status of co-ops. One has the feeling on reading the literature that has grown up around the Federation and around the tax controversy that the Federation position was stated by another group of embattled farmers a century and a half ago. "If they mean to have a war," Seth Parker said at Lexington on that fateful April day in 1775, "it may as well begin here."

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The Dairy Situation

By DR. O. B. JESNESS

Chief, Division of Agricultural Economics, University of Minnesota, St. Paul, Minn.*

PRIMARY PURPOSE of this discussion will be to center attention on some of the factors in the dairy picture ahead. The war supplied an excellent demonstration of the dependence of dairymen on the non-agricultural situation. Increased production and employment provided consumers of dairy products with increased means for buying these and other needs. On top of this demand came increases in purchases for military and overseas needs. Farmers responded to these demands more effectively than anyone really had reason to expect, especially in view of shortages of labor and equipment which plagued many of them, and as a result milk output topped previous records.

Milk is not a single, simple commodity. It is a product with a variety of outlets and uses, and when a market change takes place its effects are not necessarily the same for all of the lines. Normally, market milk for consumption as fluid milk represents the use which ranks at the top. When consumed as fluid milk, all of the food constituents are employed directly in the human diet. There is no loss through waste and no diversion to uses of a lower order. Fluid milk consequently represents the use which normally returns the highest prices. Any decided and general increase in the demand for fluid milk consequently enables it to draw supplies from some other uses for milk.

Butter, a product of major importance in this area, becomes a residual claimant for milk when demand for fluid milk is strong. When depression hits and consumer incomes fall, the reverse becomes true. Butter in considerable measure then becomes the outlet for milk surpluses from other lines. During the war and since, demands for milk in better paying outlets made inroads on the supply available for butter, and butter output consequently fell very decidedly during the period even with milk production at record levels.

The Question of Butter

Some persons who had become accustomed to taking pride in the commanding lead of Minnesota as a butter producer expressed real concern over the falling off in butter output in this state. They did not appreciate that the drop in butter output resulted from a shift in the use of milk rather than from a curtailment of dairying. Dairy farmers could hardly be expected to lie awake nights worrying over a situation which was drawing more of their product into higher price uses.

DR. O. B. JESNESS

When consumers are faced with shortages in dairy products, they apparently prefer to forego their customary supply of butter rather than to cut all lines of dairy consumption equally. This may bear watching insofar as the future is concerned. The average butter consumption dropped from 17 or 18 pounds to 11 or 12 pounds. Consumers were still getting the butterfat in milk or other products. The sixty-four-dollar question is over how readily or quickly consumers will return to the former level of consumption of butter when supplies again are available.

The arguments pro and con over the relative merits or demerits of butter and oleomargarine may have created the impression in some minds that the drop in butter consumption has been due to a shift to oleomargarine. While it is true that oleomargarine supply and consumption have increased recently, that has replaced only part of the reduction in butter supplies. It is a rather a case of oleomargarine stepping in to fill in part a reduction in butter supplies caused by a shift of milk to other uses than one of butter being forced out of the market.

Buck-Passing Over the H. C. L.

It apparently is easy for us to delude ourselves into thinking that the high prices resulting from a decided inflation represent a condition of prosperity. We are less certain when we look at the prices we have to pay for things we buy. The housewife as the buyer of food is acutely conscious of the strain which high prices place on the family budget. Each line of activity seeks evidence for use in convincing the consumer that its prices are not high. Naturally no one wants to bear the blame in a situation of this sort. The politicians have considerable company in the buck-passing going on regarding the H.C.L.

Milk prices in metropolitan markets have kept pace with the rise in money incomes of consumers during the past year. Consumers have continued to take about the same amount of fluid milk and cream as during previous years in this war period. The supplies of milk available for butter manufacture consequently have not changed greatly. In fact, total production of milk has been falling below that of recent peak years due mainly to a reduction in cow numbers. Some reduction in amounts of dairy products shipped out to meet food needs of other countries has kept overall consumption from changing as much as it otherwise would have.

The number of milk cows in the United States on January 1 of this year

*An address presented September 20 during the three-day Dairy Products Institute held at University Farm, St. Paul, under the auspices of the University's Dairy Department.

Merry Christmas
Two wishes do we bring to you
They're full of warmth and cheer
May you be happy Christmas Day
And joyful all the year!
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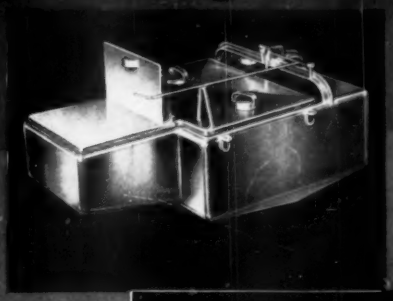
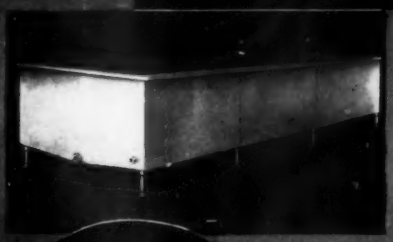
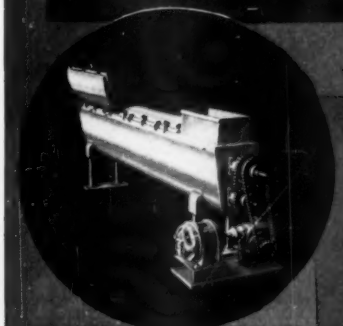


Weigh Tank

Receiving Tank



General Purpose Tank



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XUM

was practically the same as in 1940—a drop of about 10 per cent from the high point in 1945. The drop for the west north central states, which include such important butter areas as Minnesota and Iowa, has been more marked than that of the country as a whole. Various factors have had a part in this. For one thing, we have been in a period when the cattle production cycle has been in its downswing. Feed and labor shortages have had considerable influence. Some grain farmers with dairying as a sideline have found it advantageous to shift out of dairying to take full advantage of the higher grain prices.

Generous Feed Supplies in Prospect

Now conditions are changing. The large wheat crop of 1947 left a comfortable carryover in spite of heavy aid shipments to Europe. The 1948 wheat crop, after a poor start last fall, came through magnificently to be second in size only to last year. Prospects for the corn crop indicate a yield of more than a billion bushels over last year's crop, or a record output.

The picture this fall is one of generous feed supplies in contrast wtih the scarcity of a year ago. Cattle and hogs will be fed to heavier weights, and more general feeding of grain to dairy cows is in prospect. The price advantage has swung back to favor livestock and livestock products.

Eastern milk producers who rely heavily on purchased grain feeds will be encouraged to maintain output of milk. Livestock numbers cannot be increased all at once. A larger pig crop is to be expected next spring with a more generous supply of pork on the market by the fall of 1949. Cattle numbers change more slowly, but indications are that the production cycle will turn upwards again before too long. Some farmers who have shifted out of livestock will have an inducement to return and others will plan expansion.

Production of dairy products will not increase rapidly enough to create market surpluses by itself over the short run. However, it is not impossible that supplies will become more generous if anything should happen to take the bloom off the market.

The prices of market milk in metropolitan centers may bear some watching. These concern not only the producers and consumers in the metropolitan areas but also dairy producers generally. There is no adequate market mechanism for arriving at prices for fluid milk through bids and offers in the market. Producers' representatives and distributors have bargained in arriving at milk prices. More recently either state or federal agencies have become a party to arriving at prices and bases of sale in many urban markets. Some type of formula is used in many of the larger markets in price making.

Efforts to Adjust Milk Price Formulas

Manufactured dairy products are important in many of these formulas, but interest is increasing in finding other factors as guides to milk prices. The temptation is sure to be strong in the adjustment of these formulas to try to avoid rapid and decided lowering of milk prices. If the result should be that of holding milk prices at relatively high levels, they will draw out more milk than can be sold and the surplus will be turned into manufactured dairy products to compete with butter, cheese and other products from areas relying mainly on these outlets.

ARBITRATION IN CANADA

TORONTO, Ontario — Negotiations between milk producers and milk distributors in the province have broken down and the question of price for the next year is to be submitted to arbitration.

Premier T. L. Kennedy, in his role as Minister of Agriculture, disclosed that the Ontario Milk Producers' League and the Ontario Milk Distributors' Association have been unable to agree on price.

"The Milk Producers' League has appointed Roy Lick as their representative with power to bargain for something like 100 markets," said Premier Kennedy.

"So far the distributors have not appointed an arbitrator and the board (Milk Control Board) which met this week, has given them until next week to do so," continued Premier Kennedy.

"Next week the two arbitrators should meet, and if they do not come to an agreement, I will appoint a chairman before the week is over, so that arbitration can start immediately," he said.

Moreover, if consumers' prices continue to rise or fail to adjust themselves to any decline in consumer incomes, more and more people will find themselves excluded from the market, or at least be obliged to reduce purchases. It just is not true that everyone shares in the rise in personal income during a period of inflation. Some are decidedly disadvantaged by an inflation. Some find themselves priced out of the market.

If this process runs its full course, the consequence will be an increasing number of surplus situations which will invite curtailment of output, particularly in manufacturing lines. If this occurs, one consequence will be reduced employment with still more persons being forced out of the market for goods. When this happens, it will become clear that the inflationary honeymoon is over. The bubble then will have been pricked. Deflation will be under way. This is a point which should not be missed by dairymen.

Not Prophesying Gloom

Lest this be misunderstood, let me hasten to say that I am not a prophet of doom or gloom. I am not forecasting a return of 1932 in the foreseeable future. We cannot rule that out as being impossible, but it does not seem very probable at this time. The point in mind here is that we cannot continue this inflationary spiral indefinitely.

This is not the time or place to discuss details of inflation control, but because of its importance in the present picture, it may be in order to touch on a few of the highlights. The real cause of inflation is that we have more money in the market seeking goods than there are goods available at this time. We should have stopped inflation in its tracks, or at least taken much of the wind out of its sails, by reducing the excess supply of money at a much earlier stage.

Had we really been farsighted, we would have been less enthusiastic about the tax cut made earlier this year. It would have been sounder public policy to have retained more of the taxes, not to provide government with means for inflationary spending, but to enable it to retire more of the bonds held by the Federal Reserve System. Unfortunately, that paste is out of the tube now and its return is well-nigh impossible.

Naturally, no one is anxious to earn the distinction of pricking the inflationary boom, but in our apparent fear of deflation we tend to be entirely too complacent about the damage caused by inflation. We apparently do not see clearly that to the extent we let inflation get out of hand, to that extent we increase the prospects of a decided reaction at some time ahead.

To be sure, we have taken some slight steps. We have tightened up on credit to a moderate degree. We have increased bank reserve requirements somewhat, but there is still abundant means for further expansion in loans. We apparently have made a fetish out of keeping interest rates low and of supporting government bonds. Advocates of a continuation of this program tend to picture the terrible consequences which might flow from letting nature take its course.

May it not be possible that their fears are exaggerated? Do they not underestimate the losses resulting from continuing inflation? At any rate, might there not be something said for freeing ourselves to the point where we could

(Please turn to Page 74)

Petition Stabilize Price

A proposal which would give New York City consumers cheaper milk in exchange for stabilized prices to dairy farmers after January 1 has been recommended by the Dairymen's League Cooperative Association and other producer groups, it was explained recently.

The producers' organizations have petitioned federal and state officials to establish a January price 44 cents lower than the present price for the New York market.

This would make possible a one-cent per quart reduction in consumer milk prices.

Officials of the Dairymen's League said if such lower prices will encourage greater consumption of milk, farmers' returns probably can be maintained at levels sufficient to assure an adequate supply.

While feed prices have declined slightly, this has been offset by the higher prices of machinery, equipment, tools, and supplies which farmers must have for milk production, particularly as caused by the increased prices of steel from the third-round of wage increases, the petition stated.

It was pointed out that this action is possible because: (1) milk supplies presently are adequate with favorable prospects in the next four to six months; and (2) that milk prices normally are adjusted downward during the first quarter of the year when economic conditions permit.

A petition to Secretary of Agriculture Charles F. Brannon and New York State Commissioner of Agriculture C. Chester DuMond asked that the January, February, and March fluid prices in the New York Market be fixed at $3.68, compared with a December price of $6.12 per hundredweight. Milk producers groups, other than the Dairymen's League, joining in this petition were the Metropolitan Cooperative Milk Producers Bargaining Agency, Eastern Milk Producers Cooperative Association, and the Mutual Cooperative of Independent Producers.

"A drop of 44 cents a hundredweight in the Class I-A (fluid) price as of January 1 as herein petitioned will, in and of itself, somewhat discourage dairy farmers, many of whom will believe it to be unjustifiable. However, if at the same time the price is floored at such level for the three months period of January, February and March, some of this dissatisfaction may be allayed and the discouragement may not be too severe," the petition stated.

Farm milk prices lower than the ones requested, Dairymen's League officials emphasized, would bring undue hardship to dairy farmers and would bring discouragement to the extent of endangering the milk supply.

●

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There are two kinds of buyers for most any product on the market: one, the casual customer, who buys from impulse; the other, the regular customer, who buys from habit.

Certainly, the second type customer is much more desirable. He (or she) is the customer who stabilizes markets; who insures business success; who provides the profits at the lowest selling cost.

Habit buyers, however, are not cultivated over-night. They are secured through a long-term process of education and satisfaction. Their patronage is won and held through a promotional process of minding and reminding. Minding is a job of deep rooted education. Reminding is a job of advertising and merchandising.

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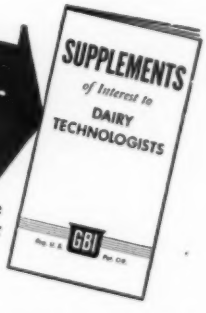

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LET'S LOOK AT BRUSHES

Facts Concerning Their Action — Size, Spacing of Bristles Is Important
Inquiries Into the Operation of Common Cleaning Tools Reveals Some Startling

By **NORMAN MYRICK**

A FOX WITHOUT his brush would hardly be a fox and a witch without a broom would probably find difficulty in gaining admission to the more select witches clubs along the Milky Way. As a matter of fact, lacking brushes and their elongated relative, the broom, it is difficult to conceive of our Twentieth Century society doing other than bogging down in a welter of unsanitary confusion.

Fortunately, brushes are an accepted part of our civilization. Indeed public figures without number can recall with whimsical nostalgia that their first steps along the paths of truth and virtue were buttressed by timely applications of a hairbrush in reverse. The Tin Lizzie and Superman may rival the influence of the Fuller Brush Man in the American Home but they have not surpassed him.

In the dairy industry, brushes are the van guard in the battle for quality. When one reflects on the tempermental character of the material with which the industry works and recalls that somewhere between 20 and 25 percent of the labor expended in a milk plant is devoted to cleaning equipment, the significance of brushes approaches its proper stature. The strange thing about brushes, however, is that in spite of their indispensable role in home and industry few people know a great deal about them, much less are they able to say what makes a good brush. Well, what does make a good brush? It's a fair question.

Men who have studied brushes, men like John Perry of Sealtest, say that whether a brush is good or not depends a great deal on what the brush is supposed to do. Three general principles must form the foundation for any consideration of these tools. Specific brushes should be designed for specific jobs. Brushes should scrub with the end of the bristles rather than swab with a substantial part of the bristle, although, and here the first principle comes into play, occasionally it happens that the job calls for a swabbing action rather than a scrubbing action. In that case the brush should be designed for such a purpose. Finally the brush should be economical. The economy may be in the initial cost but more likely it will be in durability.

Mr. Perry cites the example of a bottle brush with which he worked. The original brush had a wooden handle with closely packed bristles of a small diameter. This brush was primarily designed for cleaning fittings but was being used for cleaning bottles. The handle broke often. The thin bristles bent over and swabbed instead of scrubbing. Because of the close packed bristles the cleaning solution was inadequately applied to the surface of the bottle. A proper bottle brush, which emerged from experiments with the original, had a metal handle and bristles made stiffer through an increased diameter. Furthermore, fewer bristles were used and these were distributed in such a manner as to allow the cleaning solution to reach the surface to be cleaned and also to take advantage of the "play" in the bristles. This "play" feature of the bristle action is too often overlooked. It is important that the bristles have sufficient room so that they can move around against the surface that is being cleaned.

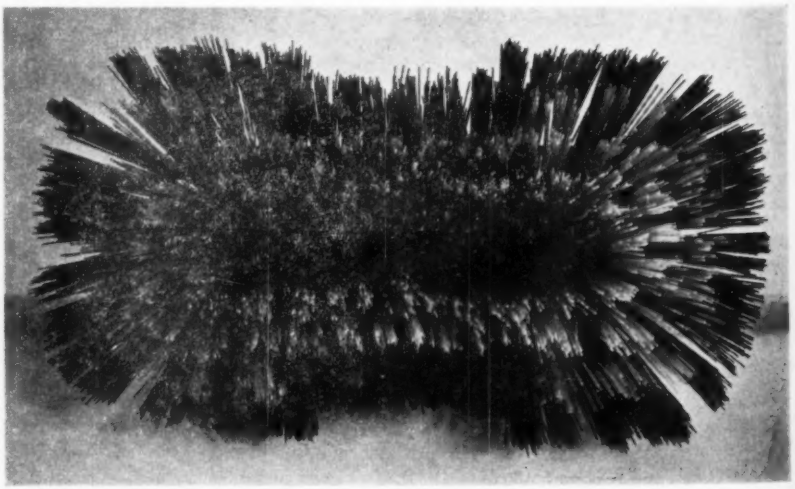
Specifications for Bristles

The length and diameter of the bristles depend on the type of cleaning to be done, a factor which also governs the shape of the brush. Sanitary pipe, for example, needs an outside as well as an inside brush. Because the outside of sanitary pipe does not get as dirty as the inside, a brush with a long reasonably stiff bristle has been found most satisfactory for cleaning the exterior. On the inside, however, where accumulated soil from a large quantity of milk must be removed, a brush with short stiff bristles widely spaced is the answer. The long thin bristles are used on the outside; that portion of the pipe is easier to clean and a heavy scrubbing action is not needed. The scrubbing action and the free application of the cleaning solution demanded by the interior is satisfied by the short bristles widely spaced.

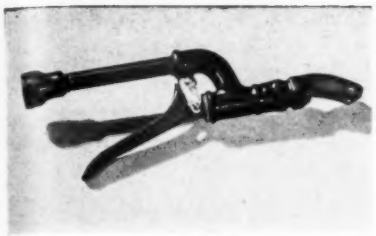
Brushes for Sanitary Pipe

The problem of doing a good cleaning job on sanitary pipe illustrates the futility of attempting to have a brush that will do all jobs. Most of the conventional brushes have bristles that "pack" when they get into the pipe. The bristles are so closely spaced that when jammed together in the confines of a pipe they form a mat through which the cleaning solution can penetrate only with considerable difficulty. Furthermore, the cleaning effectiveness of the bristles is rapidly reduced as their length diminishes through wear. The jamming factor also interferes with the cleaning solution. It is a sort of vicious circle wherein the bristles are their own worst enemy.

Specifications for bristle length which tests have shown to be most satisfactory vary according to the diameter of the



This hand brush illustrates some of the principles of brush construction that are generally overlooked. The bristles in this brush are spaced to allow room for a scrubbing action and also to permit adequate circulation of the cleaning solution.



Water economy and better cleaning are promoted by the use of this neoprene coated shut-off nozzle.

sanitary pipe. A 2-inch sanitary pipe has an inside diameter of 1⅞". The best brush for this job has a diameter somewhat greater than that of the inside of the sanitary pipe, and widely spaced. This brush, because the bristles are longer than the inside diameter, will clean the face of the ferule on the pipe. On the inside the bristles will have a bow, but it will still be the ends of the bristles that come in contact with the inside surface. The bow in the bristles decreases with wear but the fact of the bow insures continued scrubbing even with wear. It is only when the bow ceases to exist, when the bristles are worn so that they are straight that they must be replaced with new bristles.

As the diameter of the pipe to be cleaned increases the length and diameter of the bristles must also increase. It is obvious that to lengthen the bristles without increasing the diameter would result in a willowy bristle that would not produce a satisfactory scrubbing action. There is, however, an upper limit in diameter when satisfactory scrubbing ceases.

Problem of Conical Surfaces

Conical surfaces such as separator discs present a problem somewhat different from the uniform cylinder of a pipe. Nevertheless, these discs require the same thorough scrubbing that is accorded sanitary piping. Two rotary brushes moving at relatively high speeds are used. The brushes are so close together that the bristles almost touch. The cleaning solution is fed to the brushes through a perforated pipe located alongside the brushes. The discs are placed in the brushes and are gripped by the bristles and themselves rotated at about 1/6 the speed at which the brushes rotate. The brushes rotate in different directions. By regulating the closeness of the brushes to each other the tension on the discs is varied and the speed at which the discs will rotate can be controlled.

Cleaning discs is generally a right to left operation. The operator has the soiled discs at his right and places the cleaned discs on a tray at the right. The reason for this system is the fact that inserting the discs into the brushes is the most difficult job and consequently is a right hand operation. Removing the discs is much easier and can be done with the left hand.

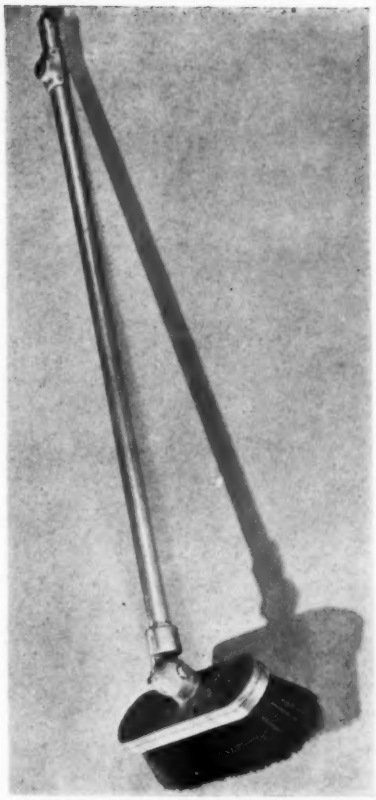
Cleaning sanitary pipe and separator discs can be done better and faster with high speed mechanical brushes than by the old manual method. Certain surfaces such as those found on pasteurizers may or may not be cleaned by mechanical brushes. Power brushes for this type of cleaning have not yet been tested extensively enough according to Mr. Perry and it is quite possible that work in this field will produce some valuable additions to the cleaning arsenal. At present most of the brushes used for large surface cleaning are manually operated. The solution is fed either through a hose held in one hand while the brush is held in the other or directly to the brush. For two handed brushes, cleaning solution fed directly to the brush is the most logical.

Cleaning Solution Temperatures

It is impossible to divorce cleaning solutions from a consideration of brushes. One of the important functions of the cleaning solution is to loosen the soil adhering to equipment so that the brushes may function effectively. A considerable amount of work has been done in an effort to determine the cleaning solution temperatures that will produce the best results. A cleaning solution is an aqueous solution, that is, a substance is dissolved in water. If the cleaning solution is cold there is a tendency for the fat to congeal. Experience has shown that warm water produces the best cleaning action and that a temperature not lower than 115 degrees is desirable. In this connection the use of solution fed brushes hooked up to a solution tank have a distinct advantage in their ability to supply a solution at a constant temperature. When the solution is carried in a pail and swabbed on, much of the solution is lost and the temperature is seldom maintained at the proper level. Another feature of the solution fed brush is the control that may be exercised over the strength of the solution. Both temperature control and strength control are important aspects of good cleaning.

Rinsing likewise varies in efficiency according to the temperature of the water. The use of cold water is currently a fairly general practice. However, in the course of tests carried on by Mr. Perry it was found that under certain conditions cold water left a slight film. When warm water was used in rinsing this film did not exist. The most satisfactory rinse water temperature was found to be 115 degrees.

The temperature of the products that have come in contact with the surfaces to be scrubbed has a direct bearing on the nature of the bristles. Two types



Solution fed brushes are valuable where large surfaces are to be cleaned and both hands are needed. Note the push-button near the top of the handle for controlling the solution.

of surfaces are recognized, cold product surfaces and hot product surfaces. The bristles for hot product surfaces must be stiffer than for those used on cold products.

Nylon has been found to be a very satisfactory material for bristles in dairy plant cleaning. Although it is more expensive than animal fibres its greater longevity makes it more economical in the long run. Furthermore nylon is tough, it can be secured in any diameter, and is virtually impervious to water.

Perhaps the most revealing fact in connection with today's brushes is the increasing use of power driven devices. A good cleaning job can be done with hand brushes and the well known elbow grease but, as John Perry points out, elbow grease is just about the most expensive grease one can buy. Power cleaning gives a better cleaning job in a shorter period of time, is much easier on the worker and it is a lot less expensive than high priced grease of the elbow variety.

By giving proper attention to the selection of brushes plus the use of cleaning water heated to the recommended temperature some truly astounding results have been obtained. Dairymen anxious to cut cost would do well to examine their cleaning operation with a critical eye.

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Thatcher T-Square returnable glass milk bottles will easily help you increase your daily route load by one-third . . . and this will reduce costs by as much as 1c per quart.

Ask the milk dealers who have Thatcher T-Squares and they will tell you that converting to these modern milk bottles is the most important factor in reducing selling and delivery costs, because:

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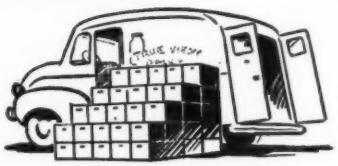
Route loads increased easily by 40%



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Gain 50% more space in cold rooms and refrigerators

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Trippage increased; result: the lowest cost container for milk

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Surveys show that housewives prefer T-Squares.

Write us to have the Thatcher Representative in your area personally give you full information about installing Thatcher T-Squares in your milk plant.

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VEL* REDUCES BACTERIA COUNTS

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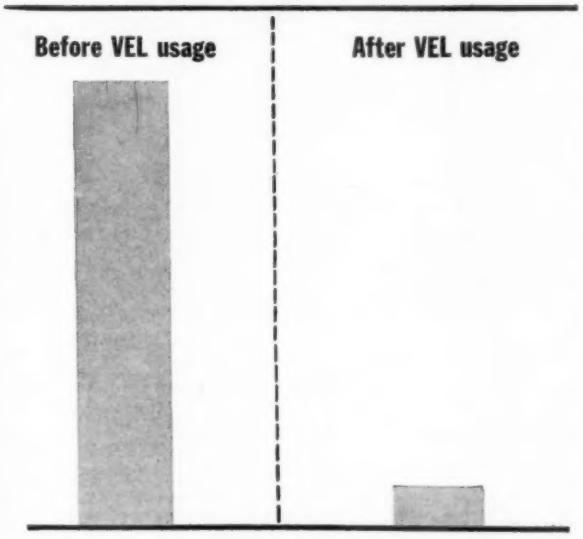
A study just released by a leading independent laboratory proves that high bacteria counts caused by inadequate cleaning methods can easily be reduced. By cleaning milking equipment more thoroughly and eliminating milkstone, Vel, a neutral monoglyceride detergent, drastically reduces total and thermoduric counts.

For this experiment, the laboratory selected a group of shippers whose consistently high counts were the result of poor milk-handling techniques. These techniques were corrected and standardized so that the only variable in the milk-handling routine was the way in which the equipment was cleaned. Half the shippers cleaned with Vel. The other half cleaned their milking equipment by any method they preferred except with Vel and the VELocity method.

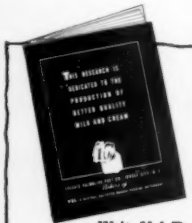
VEL AND ONLY VEL OFFERS THIS PROOF!

As shown on the chart (right), the results of this experiment prove the efficiency of Vel in reducing bacteria counts. On the farms where ordinary cleaning methods were used, the bacteria counts remained high. Where Vel was used, the bacteria counts, in every case, were reduced drastically from their former high level. Vel is not a bactericide, but is a wetting agent of the type recommended by many agricultural schools.

AVERAGE WEEKLY TOTAL AND THERMODURIC COUNTS ON TESTED FARMS



Total and thermoduric counts were dangerously high when milking machines were cleaned by ordinary methods. Counts dropped dramatically when shippers cleaned with Vel.



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Write Vel, Dept. M-669, Jersey City 2, N. J. Ask for a copy of the 38-page report, "Wetting-Agent Cleaning of Milking Machines and its Effect on Total and Thermoduric Levels of Night and Morning Milk," by the New Jersey Dairy Laboratories.

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Vel flushes out the milk fat and milk slime; so brushing is cut to the minimum. In less time, with less work ... Vel gets milking machines, separators, pails, cans, strainers, and churns cleaner than they've probably been since they were new. ©

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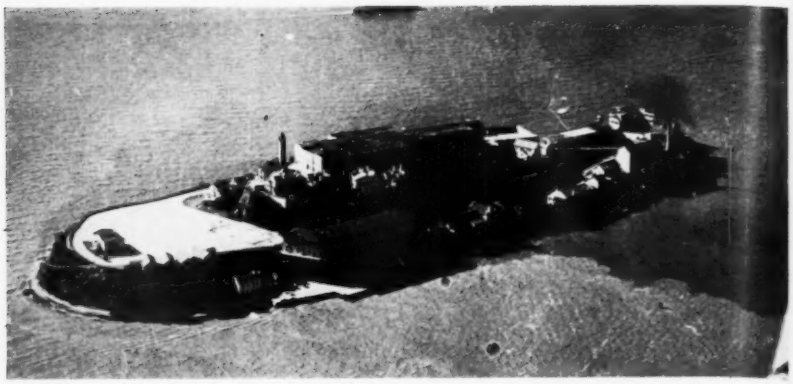
Milk GOES TO ALCATRAZ



Even on the forbidding "Rock" in the middle of San Francisco Bay the milkman makes his daily delivery. Immediately on its arrival milk is poured into prison containers in order to eliminate any chance of smuggling. They think of everything on Alcatraz.

By **PETER FABRICIUS**

WHEN JONATHAN O'CONNOR of Memphis, Tennessee, was asked what he wanted as a last meal on the eve of his execution at Alcatraz in 1936, he said: "A glass of fresh milk."

This was no unique case. Some psychologist may figure it out, but it's a fact asserted by those who are in a position to know, that condemned prisoners often include milk in their requested last menus, before they enter the lethal gas chamber at Alcatraz Island in San Francisco Bay.

Mr. E. B. Swope, the all-powerful Warden of Alcatraz, is not the talkative type. When I told him I was interested in the use of milk at the "Rock" he looked a little sour. "I don't want this prison glamorized, you know", he said. I answered it'd take an Alexander Dumas to put glamor in those twenty acres of bleak buildings.

Mr. Swope then obliged. "It is the policy of all institutions in the Prison System to serve at least one pound of dairy products in every twenty-four hours to each inmate committed to our custody," he said.

"And how much milk do you use?"

"Thirty gallons a day."

"Do *you* decide the amount of milk and dairy products?"

"No, Sir. The diets are prescribed by the Bureau of Prisons and the U. S. Public Health Service."

These diets include a number of dishes in which milk is used. I hope Warden Swope won't call it glamorizing if I pass on the information that the principal milk dishes on the "Rock" include puddings, cakes, pastry and creamed dishes.

The milk reaches the "Rock" in a federal launch which has been plying back and forth between the Island and San Francisco twice a day, ever since 1933 when Alcatraz became a federal prison for the country's toughest customers. Before that, since 1885, Alcatraz had been a point of detention for military offenders of the U. S. Army. It was the Spanish who first made use as a prison of the "Isla de Alcatraces" (Island of Pelicans) as they called it, because of the large number of these birds which nested there, that is, before the jail birds took over.

The launch picks up the milk—it's grade A pasteurized whole milk—which is contained in three ten-gallon sealed cans. But I didn't see the cans in the kitchen.

The Warden smiled. "We pour the milk in our containers as soon as it arrives."

"Do you really suspect something could be smuggled in this way—in sealed cans?" I asked.

He shrugged his shoulders. "We want to be safe." You have to think of every angle at Alcatraz. Everybody in San Francisco still remembers the sensational bloody riot in May 1946 under Mr. Swope's predecessor Warden Johnson. Marks of the fighting can still be seen in one of the cells where the prisoners held some of the guards as hostages. Since the riot, even the tiny leaks in the iron curtain around Alcatraz which precipitated the break have been sealed. The previously unsupported tops of the catwalk bars which Killer McCoy, later killed in the firing, climbed monkey-fashion and spread apart, are now wired off. If there's any escape-proof prison in America, it's Alcatraz. They even have electronic eyes there now as you enter, which will detect the smallest metal object on your person.

I asked who supplied the milk.

The supplier changes. It's ordered on a bid basis. Last month Christen's Dairy Ranch of 1427 Valencia Street in San Francisco supplied the milk. This month it's Spreckels Russell Dairy at 8th and Bryant in San Francisco.

I thanked the warden of Al Capone's one-time "home" and went to talk with Mr. C. K. Katon, Manager of Spreckels Russell and his assistant Mr. E. Vehlow, in San Francisco.

There is a striking contrast between the forbidding "Rock" and the friendly atmosphere of the plant which has a "washed" look. There's a constant coming and going of cream and orange-colored milk, ice-cream and custard trucks, driven by men in white caps and white overalls with their names on them. Through a glass window you can watch the operations of the plant from the street, as you stand under their huge milk-bottle sign at the corner.

I made some remarks about the shiny chromium bottling machines and the fact that you don't see a drop of milk spilled in this milk plant.

"Yes," said the Manager. "That's one of the prerequisites for supplying the milk to Alcatraz. We have the U. S. Health

(Please turn to Page 58)

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SNOW DRIFT PREVENTION

Wind and Snow Conspire to Create an Additional Burden for the Dairy Plant Operator — This Article Suggests Some Methods of Meeting the Problem

By **ERNEST A. DENCH**

ANY CLIMATIC interference with the essential day by day operation of a milk plant is a serious matter. A common case in winter is that of a suburban or rural milk plant in an exposed location. Cleared surfaces on the plant property fail to stay clear after the snowfall ends. Later on, heavy deposits of the old snow again envelop certain parts of the cleared surfaces. The Demon in the Case is the sudden advent of wind force. Relative calmness prevails up to that time. No wonder that hard-working milk plant crews, after finishing the chore once, shrug their shoulders and mutter "what's the use?"

Most any State Highway Commissioner will, with a desire not to arouse hard feelings or cause political repercussions, make an "off-the-record" admission that the extent of snow drift control his crews face each and every winter, is influenced by *how* certain highways were originally designed and finally constructed. Fundamentally, the same applies to privately-owned driveways, parking areas, walks, etc., in open country.

The basic essentials, as discovered in an investigation among twenty-seven states back in 1939 (no later research challenges the facts) by the Engineering Experiment Station of Michigan State College, are as follows:

1.—Elevation of grade line above the adjacent or nearby ground level. Lowest reported elevation was twelve to eighteen inches in Kansas; the highest, three to five feet, in Utah.

2.—Avoidance of out sections; or, if unavoidable, given special treatment.

3.—Shoulders of generous widths.

4.—Flat back slopes and shallow ditches.

5.—Tops and bottoms of slopes provided with vertical curves.

6.—Discontinuance of guard rail.

Of the six basic essentials to eliminate or reduce snow drifts, this elevation of grade line is the most important. It employs a principle successfully used by the railroads for generations to reduce winter traffic hindrances to a minimum. In general, this elevation of grade line should approximate the average local snowfall depth.

Not How Much — But Where

It is not always the amount of snow, or the consistency of the same, which presents the greatest trouble during or following a storm. More vital is WHERE the snow subsequently settles to an abnormal extent. Wind force creates virtually bare patches in some spots, and major drifts in others. Elevation of grade line is a height barrier which wind force can seldom circumvent. It expends, as the only alternative, the driven energy on the pocket or pockets sloping from the elevated driveway bed, filling these in wholly or in part. This is why it is essential that grade line elevation should approximate the expected normal local snowfall depth.

Even when a driveway is elevated, it should be wide enough to have shoulders. It allows for the possibility of an abnormal snowfall at one time. To plow or otherwise clear such a surface, there must be ample room to stack the excess snow when the sloping side pockets are already filled to capacity.

The use of trees and shrubs to provide a wind break and act as a snow drift preventative on adjacent surfaces, is governed by a definite planting technique. Entire cost of same cannot be fairly charged to winter operations. During the three other seasons, a tree break serves to retain soil moisture, retards erosion, and provides cool shade in hot, sunny weather. It also beautifies any place of business.

The most common error is to plant a single row of trees close to, or on, the edge of a driveway, walk or highway. Drifting snow, in coming to a halt against a group of trees, must find space to spread.

The ideal is the "cushioning" arrangement of several regimented rows of trees, appropriately spaced. Each row will, in turn, absorb a percentage of the drifting snow, with some of it spreading out between each row.

The northern side of any tree break encounters the most

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vicious wind activity. That is why it should not be planted nearer than two rods from any surface requiring protection.

Three Rows of Trees

Three rows is the acceptable multiple unit for a tree break under normal, or average, winter conditions. It is common practice to plant the trees from eight to ten feet apart, according to size and anticipated annual growth. Distance between rows varies with the amount of ground available. Minimum is five feet; maximum is fifteen feet.

Abnormal conditions during some winters may overtax the three-row grouping in snow storage capacity. There is also the possibility that some trees planted in the three rows may perish from severe cold or drought. To plant five rows when the land is available is like having a spare tire or two in reserve on a truck or car. These fourth and fifth rows can be low but bushy shrubs.

The most economical buy for a tree break are two-three year old seedlings raised by a commercial nursery of high local repute. There is a minimum of survival risk with such seedlings.

A properly-grown young conifer from a local nursery has a bushy growth of lower branches reaching almost to the ground. The tree, as a whole, is triangular, narrowing to a crown at the very top. Any such tree, even if young, has a true symmetrical appearance—the type chosen at Christmas for the home living room.

Trees in any snow break will grow. As the years pass, some thinning-out and transplanting will be necessary. These transplants can be used gradually to expand the protective barrier from 3 to 5 rows.

Conifers suitable for snow drift control, and also not in the fancy, or expensive, class (the blue spruce is one of these) are five variations of pine (white, jack, Austrian, red and Scotch), four varieties of Spruce (Norway, white, black and red), three varieties of fir (balsam, white and Douglas), two varieties of cedar (white and Eastern red), and just plain hemlock. Soil, regional conditions—and price—will influence choice.

For any conifer to do its duty good and proper, crown, or top, density is all-important in the handling of snow drifting. Best bet is a fir. The spruce, which has a crown of medium density, does well when such trees are planted close together. The pine has too open a crown to be acceptable.

All the above advice applies to a *single* row tree break. When the break consists of from two to five rows, these crown density requirements may be discarded. What the first row of trees may fail to catch or hold, the second, and subsequent, rows will halt.

Conifers vs. Deciduous

Disadvantage of the deciduous type of tree is that its bare branches from mid-fall until mid-spring are incapable of "catching" all of the snow or bearing the full brunt of winter winds.

Disadvantage of the conifer is that it is a slow grower. Where speedy results are desired, a combination plantation is recommended. Deciduous trees should be planted where they will receive the full wind force. They can help carry on until the conifers, in more protected locations, have made sufficient progress to handle the overflow.

In any such mixed plantation, some trees will be deprived of the sun. The forest primeval law prevails. Trees either die or permanently lose their all-important lower branches. Among the conifers the Norway spruce has the stamina to adjust itself. Among the deciduous types, the white birch thrives when forced into the shade.

A Lot Depends on the Cat

With the meteorlogical witch doctors taking a peek at the fur on squirrels and looking sagely at the geese heading South, the prudent dairyman will heed the signs and get ready for cold weather.

We heard about a sure fire system for calculating the number of snow storms that will occur during the winter months the other day. Count the number of days from the first snow storm to the full of the moon, then count the number of days from the full moon to the end of the month and multiply the two figures. The result is the number of storms that will take place. In case of doubt a storm is defined as a fall of snow deep enough so that you can track a cat.

Conifers do not flourish in all geographical, or climatic zones of the United States. For example, in those of our prairie, or central states with the climatic extremes of severe winters and dry summers, certain deciduous trees and shrubs will survive. Conifers perish in the same terrain.

The deciduous type of tree is also subject to nature's survival of the fittest law. For example, out of eighteen types or kinds of deciduous trees tested over a twenty year period in twenty *other* than coastal or mountainous states by the Engineering Experiment Station of Michigan State College, only seven survived or promised to endure. The survivors, all broadleafed trees, were the Chinese elm, green ash, choke cherry, boxelder, Siberian pen tree, buffalo berry and American plum.

Shrubbery to the Rescue

The shrub is a Cinderella among snow break aids, thought of or adopted in a major time-saving emergency. The shrub has the advantage of quick growth, and no transplanting headaches. It does not shut out light, in the course of years, from windows of adjacent buildings. It provides, in other seasons, the lovely green growth of spring, the colorful flowers of summer, and the colorful foliage and berries of fall.

The shrub's chief winter advantage is being able to resist low temperatures, and having branches strong enough to endure without breaking.

Shrubs particularly adaptable to snow-wind "blockage" operations include three varieties of mock orange, two varieties each of lilac, hawthorne and spiron. Such compact hedge formers as privet, Japanese barberry and forsythia are also on the approved list. Choice will, naturally, be governed by the local terrain, so a reliable local nurseryman should be consulted. As an example of this, we may cite the experience of the Engineering Society of Detroit, Michigan. In the landscaping of the grounds outside the society's buildings, evergreen shrubs were lost each year. The combined causes were winter winds and industrial smoke. The Society is gradually replacing the evergreens with deciduous types.

The shrub is also a useful stand-by when there is not the space for a multiple row snow break. A single row, if placed way back from the driveway, walk or highway, is efficient if each shrub is bushy—meaning dense and compact—and spaced to leave no openings.

Any such shrub plantation achieves its snow break objective when set a distance of at least fifteen times the height of the barrier. The measuring stick is the average tallness of the shrubbery at the time of planting. E. A. Finney, an assistant professor at Michigan State College, made this recommendation to the Highway Research Board back in 1936. The recommendation *still* stands.

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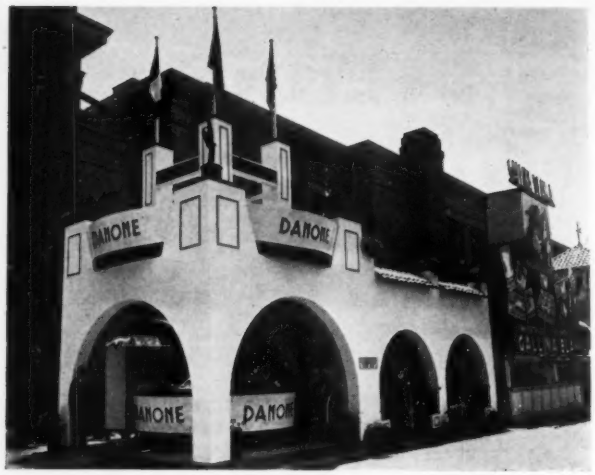

Flying the flags of the three countries in which it operates, the Danone Company features this booth at the Annual Barcelona Exposition in Spain. The booth's function is much the same as that of a custard stand at a state fair in this country.

Yogurt

MAKES A STATESIDE PITCH

By **HUGH ROBINSON**

PONCE De LEON'S search for the Fountain of Youth might have had a more successful conclusion had he looked a little nearer home. If he had gone to the Balkan countries of Europe rather than the tropical swamps of Florida he would have found a curiously robust and long lived populace. But instead of a miraculous fountain he would have found his goal in a custard like food called Yogurt.

This milk product, relatively little known among Americans, was first brought to the attention of the world by Professor Elija Metchkinoff in his report entitled "The Prolongation of Life". Published in 1908 the report attempted to show that the abnormally long life span of people in the Balkans was due to their use of Yogurt. He contended that lactobacilli found in Yogurt and which later turned into lactic acid was lethal to harmful bacteria found in the intestinal tract. Metchkinoff's conclusions were accepted by many as the voice of authority because he was a Nobel prize winner and a director of the Pasteur Institute in Paris. As a result of this, Yogurt became quite popular in Europe, a popularity which still exists.

Yogurt is not a new product but has been manufactured by people over a period of years that extend back through the middle ages. However, under scientific conditions that prevail today, Yogurt can be made with a predetermined number of cultures of a quality higher than that ever dreamed of by Balkan housewives, who used to make it in the bathtub style of old prohibition days.

In this country the largest manufacturer of yogurt is Dannon Milk Products, Inc., of Long Island City, New York. President of the company is John Carasso, and rounding out the executive staff is a father and son team with father Juan E. Metzger as Vice President and son Juan E. Metzger Jr. as Sales Manager. In their plant Dannon has set up the most modern yogurt manufacturing operation known in the field today.

In the laboratory, where the lactic cultures are prepared, technicians scientifically produce the cultures which will later be added to fresh pasteurized milk. This milk is obtained from another dealer who has already pasteurized it but to insure a high quality and disease free milk it is then repasteurized at the Dannon plant. After the repasteurization cultures are added and the batch is thoroughly agitated to distribute the cultures evenly throughout the milk. Then it is piped over to a bottler and capper after which the bottles are loaded onto dollys and rolled into deep upright cabinets which perform the operation of incubators. These incubators are lined with pipes through which water heated to a temperature of

XUM

100°F. flows. The yogurt remains in the cabinets from two to four hours depending on various factors such as outside temperature etc. It is while in the incubators that the yogurt gains its custard like consistency. Upon removal from the incubators the yogurt is immediately placed in a refrigerator and brought to a temperature of 40°F. When it is stored in this manner it will remain fresh from four to six days.

In the design of a bottle that could be used for yogurt there was only one hitch. Yogurt, because of its custard like consistency has to be placed in a wide mouth bottle so that it can be readily spooned out and served or eaten from the jar. Finally a wide mouthed bottle was designed that met the needs of the product.

Original Design Necessary

One of the problems that confronted the Dannon people when they first set up their plant was finding a suitable filler for the wide mouth bottles. All fillers currently manufactured in the United States were designed for milk bottle or cream bottle use, and all were too small to cap the yogurt bottles. Finally it was decided to design a new capper which Dannon now uses and which is available for other operators who need a capper wide enough for large bottle tops.

In a little over five years since the Dannon company came to this country they have become the largest manufacturers in the United States devoted exclusively to making Yogurt. The company, which is known throughout Europe as Danone, has headquarters in Paris with another branch in Barcelona, Spain. Had Ponce de Leon not been so bent on traveling half around the world to find his life giver he might have waited and run around the corner to buy Yogurt in almost any food store in his native land.

One of the promotional ideas of the Danone Company is to include an exhibit of their products in the Annual Barcelona Exposition. Every year a colorfully painted and brightly trimmed booth is erected and the latest style packages of the Danone Company are shown. The booth's function, of course, is much the same as an elaborate frozen custard stand at a state fair in this country. Atop the booth fly American, French and Spanish flags denoting the countries in which the company operates.

When the Dannon people first came to this country they were faced with a difficult choice. Throughout Europe the company was known as a producer of a high quality product. Europeans pronounced their name Dan, as in Daniel, and one as in none. Fearful of what Americans might do to the pronunciation of their name they decided to change the spelling in an effort to foil the name garblers.

Dannon to the Rescue

One of the exciting incidents that has occurred to the company recently was that of supplying Sir Stafford Cripps, Chancellor of the Exchequer in His Majesty's Government, with yogurt during his visit to this country last October. For several days before his arrival there was a good deal of consternation in Washington diplomatic circles because officials of the State Department knew of Sir Stafford's great liking for yogurt. The question was, where to get it. Dannon finally came to the rescue. In a specially designed refrigerated box a fresh daily supply of yogurt was sent to Washington by express while the diplomat was in this country. At the end of his visit Sir Stafford directed his secretary to write to the Dannon Company and express his most sincere thanks. That letter read in part, "The Chancellor of the Exchequer has asked me to thank you...for your courtesy in making supplies of yogurt available during his stay in Washington. He much appreciates your kindness."

In the few years that the American Dannon Company has been operating, more than 3000 outlets have been established

The laboratory of the Dannon Company in their Long Island City plant sets the quality control pace. Notice the sterilamp in the left foreground under which the cultures are prepared.

in the Greater New York area alone. These outlets are all stores and include at least one chain that carries the product in all its branches.

Because yogurt can be stored in refrigerators for almost a week, daily deliveries are not necessary. It is the practice of the company, however, to date the caps so that each bottle can not be sold should it still be in stock after the "safe" period. In this way each store reorders at least once a week and oftener if demand warrants it. Each day's production is governed by the number of these orders and varies accordingly from day to day.

Delivery of yogurt is done by truck and express. The trucks are used when at all possible but if the destination is too far the yogurt is placed in ice packed cases capable of holding 60 bottles and then shipped by express. Orders that must be shipped by express, however, are not encouraged because of the extra work involved in packing the yogurt.

UN a Big Customer

It was only natural when the United Nations set up temporary headquarters at Lake Success, Long Island, that yogurt be in great demand. In supplying the UN cafeteria and dining room with yogurt the Dannon Company has created tremendous good will for itself not only among the delegates but among all the personnel who have tried it. To those yogurt fans from foreign countries it was a touch of home and to those who had never had any it was a new gastronomic adventure. Yogurt is an extremely versatile food. It can be served in a number of different ways. Yogurt with sugar, yogurt with preserves, yogurt with pineapple, yogurt with cereals, and as a plain honest dessert are only a few of the possibilities.

Athletes find that this milk food is not quite so heavy as regular milk and is a quick energy food. To add further to a growing list of yogurt boosters are those unfortunate people who have ulcers. Many of them, through the advice of their doctor, have tried yogurt and found it not only completely satisfying but also easy on the stomach. The number of people turning to yogurt in this country is mounting rapidly and the market is wide open.

The biggest job in the present day Dannon yogurt operation is educating the public. The "gimmick" is a simple one. Heretofore according to Mr. Carasso yogurt was considered by many as a medicine to be taken when one was ill. Yogurt does have amazing health benefits, but these benefits must be presented to the public so that yogurt assumes the role of not only a medicine but also an everyday food.

KNOW YOUR MACHINE CAPACITIES

Efficient Production Depends on an Accurate Knowledge of the Load Carrying Ability of Every Machine in Your Plant

By **ERNEST W. FAIR**

"KNOWLEDGE MEANS POWER," declares the old proverb, and it certainly applies when we consider the subject of control over machine capacities in our dairy products plants. Getting more production from any given machine in that plant results when the plant management knows and understands the capacity of every machine therein and how to control that capacity to most efficient performance.

Such studies begin with determining in the most accurate way possible, how long it will take the given machine to perform its operation successfully. When such accurate information is at hand machines can always be kept more continuously at work, production efficiency increases, and plant management can assign schedules for production with much greater control than where hit and miss methods are used.

Such records of machine capacity are generally useless unless they are most accurate and unless they are obtained from study of each of the individual units in our own plants. There are of course industry wide experience standards but these all cover the "ideal machine" and somehow or other such units seem to never exist in our own plants. When we understand that many factors peculiar to our own plants such as the batch of materials being used, skill of operators, efficiency of the installation of the machine, power accuracy and others, affect those figures we can readily understand that any such capacity figures we may use in production control can very well be inapplicable to our own units and result in almost useless production schedules.

Include All Factors

An individual study by actual experiment or trial of each individual unit in the plant is most advisable. When this study is planned we should make certain that all factors in existance, from assurance of steady flow of power to machine maintenance, are in order. Only when the machine is tested under all of these peculiarities of our own plants can we be sure that the capacity figures we received can be used with dependency in planning production schedules.

Expensive equipment and costly labor demand efficient management. An understanding of machine capacities is part of the battle.

Records of past performance, if kept with respect to the units used in our own plant, can serve as a valuable source for such data also. It is wise, in using such records, to investigate further into the grade and type of materials being used on the machines, class of workmen and general conditions in the plant . . . and at the time the records were being compiled. These can be compared with similiar conditions in the plant today and adjustments made in the new ratings to compensate for any variances in the figures.

It must also be remembered that speed varies with the type and degree of material and the knowledge of how to use the unit on the part of its operators. Often one can obtain increased production speed from a unit by changes in materials the machine may be processing. Many plant executives are finding it advisable to add this factor to purchasing of materials, for materials which may be processed at greater speed in the plant can prove to be less expensive even though initial costs may be greater.

It is also true that machine capacities can often be increased by broadening the knowledge of the men and women using those machines. When plant management seeks to boost production per day figures, it may well give thought to whether or not this increased machine capacity cannot be obtained by increasing the efficiency of the operators of these machines.

Speed Alone Will Not Increase Capacity

Since our goal is increased production we must not lose sight of a generally applicable truth: insufficient power may occur when operating near speed limits of machines. This loss of power may result in either a drop in quality of the finished work of a machine or in greater stresses upon that unit. Increased maintenance costs, shortened machine life, and more instances of faulty production may arise when we seek to obtain greater machine capacity by speed alone. It very seldom works out successfully in this industry.

Studies of the time required to get the machine ready to go to work are difficult to pre-determine but they should be undertaken if our machine capacity knowledge is to be accurate. Such studies will often reveal ways and means of increasing production per day from the plant as a whole and are very well worth the taking in any dairy products plant either in connection with studies designed to increase machine capacity or as a general over-all investigation of possibilities of increasing efficiency in the plant.

It is also to be borne in mind that such analytical work should be geared to determine the maximum capacity of each process in the plant as a whole. Any given unit whose capacity is two times that of any and all other units in the plants production line actually has no greater capacity than the sum total of the ability of the other units in that line to produce. Since such a unit can seldom have this extra capacity utilized through speed-up of the other units in the line the only way we can profit from such a speed-up is to route production so that it can serve two production lines rather than one.

No reader has to be told that bottlenecks in the plant are the most serious hinderance to economical production. If

(Please turn to Page 58)

Sing a song of Christmas Seals!

It's part of the American Christmas spirit — to give the greatest gift of all . . . health, life itself.

It began in 1907, this idea of buying Christmas Seals to overcome tuberculosis . . . and each Christmas since, the crescendo has swelled. Last year, it reached a mighty chorus of more than 15,000,000 American families.

You probably were included; thank you, and thank you again. If not, join in. Add even a tiny remembrance to the bottom of this year's Christmas list. Send your contribution to your Tuberculosis Association, today, please.

BUY CHRISTMAS SEALS

Because of the importance of the above message, this space has been contributed by

American Milk Review

THE CORRESPONDENTS REPORT

NEBRASKA

By EMMETT CURRY

OMAHA, Neb.—Importation of milk has started for the fall shortage period in the Omaha milk shed which also includes Council Bluffs, Ia. As much as 15,000 gallons weekly is being trucked in now from near the Twin Cities in Minnesota. Last year importation reached 1,500,000 pounds a month from September to December. Milk came then from central Nebraska, a source denied the milkshed by ordinance requirements this year.

There are 600 fewer producers in the Omaha milkshed this year compared to a year ago. The total now is 2,200. Dairies in Norfolk, Neb. boosted prices a cent a quart to 18 cents, the first increase in a year. Fairmont Foods Company, Omaha, paid a $1 quarterly dividend on preferred and 35 cents on common stock.

W. G. McKubbin has resigned as manager of the Omaha branch of Creamery Package Manufacturing Company to become general manager of Goodrich Dairy Company, Inc., Omaha. Lewis R. Hanson of Omaha has bought from George Ruston the Red Oak Creamery which Mr. Ruston operated at Red Oak, Ia., for 25 years.

Two drivers for Graystone Dairy and one of Roberts Dairy Company were arrested by Omaha police for violating an ordinance prohibiting deliveries before 7:30 a. m. The rule was put through by a union. They won dismissals in municipal court when they pleaded guilty.

Meadow Grove has become the first to come out on the Omaha market with a square-top paper container. Roberts and Alamito also plan to come out with the container. Roberts has had a peaked-top paper container on the market since 1942.

Extension of irrigation in Central Nebraska already has drawn dairy interest. Roberts Dairy Company is putting up a $100,000-plant at Grand Island, Neb. Gilbert Steele of Lincoln, Neb., will be manager.

The Nebraska Department of Agriculture has asked the Attorney General's office to study a request of Roberts Dairy Company, Omaha, to sell a milk-base product with 1½ percent butterfat. Rufus Howard, agriculture secretary, contends the law prohibits sale of the product as skim milk because not all the butterfat has been removed. Neither can it be sold as standard milk which, by state requirements, must have 3 percent butterfat. J. Gordon Roberts, company president, declared that his firm offered the vitamin-fortified milk on advice from Omaha physicians.

Loss amounted to $15,000 when fire destroyed a 10 thousand-bird chicken house at the broiler project of C. A. Swanson & Sons, Malvern, Ia. There are four other houses in the project, largest in this area.

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MASSACHUSETTS

By JEFF STERNS

NEW BEDFORD, MASS.—The dairy industry here has been showing a great deal of interest in a new industry that has located in New Bedford. This new industry is the manufacture of ice cream vending machines.

Several manufacturers have attempted to put something of the sort on the market before, but always ran into difficulty when the machine's refrigeration apparatus froze the ice cream bars together which either caused a flow of bars to the customer for one coin or else refused to work at all. The Craig Machine Company which will soon go into high gear production, egged on by the dairy interests, has overcome this problem.

It will be easy enough to understand how this company licked the bug-aboo when one knows the name of the mechanical genius who worked on it. It is none other than Erick Kauders. In case you have forgotten, Kauders was the man who invented the bazooka—the contraption that helped this country battle the tanks of Germany during the big fracas.

Before the end of the year the company expects to be producing ice cream vending machines at the rate of 200 a day.

"If it had not been for the interest shown by the dairy industry, we would probably not be ready for several months yet," Mr. Towne, president of the Craig Company, says. "The dairy field has shown so much interest and given us so much help that we were able to make much faster progress on our machines."

Each machine will hold 144 bars which will sell at ten cents. In any favorable position the machine should be emptied at least once every twenty-four hours. This would mean a gross of about 37,000 bars a year, or an intake of approximately $3,700.

Kauders, the bazooka inventor, is credited with the invention of the mechanism that keeps the ice cream bars from freezing to one another. Seen by a novice, this part of the machine appears to be a vibrator that keeps the bars jiggling just enough to keep them separated while they remain in the freezing compartment of the machine.

When on the market, the machine will stand out in brilliant white porcelain and will be almost as tall as the average man. The ice cream the customer will receive will be a bar that is covered with a milk chocolate coating. Either two nickles or a dime will start the machine in motion.

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TEXAS

By JIM TAGGERT

DALLAS, TEXAS—Major Dallas dairies have raised prices on sweet milk (1c), buttermilk (1c), chocolate milk (1c), cottage cheese (3c) and coffee cream (8c).

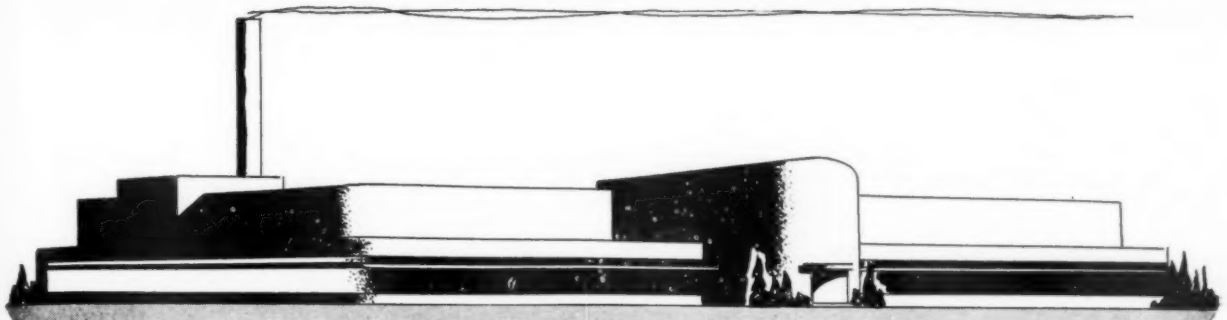
Several spokesmen in the industry here said the milk companies have agreed to pay the producer $6.25 for every 100 pounds of milk brought to market, which is a price increase of 35c.

"The dairies," one spokesman said, "should not be expected to absorb the increased wholesale cost without increasing the retail price to the consumer."

"Due to high prices being paid for farm commodities generally, it is becoming more difficult to keep the dairymen interested in continuing to produce milk," Earle Cabell of Cabell's, Inc., said.

"Present stringent health requirements call for better-trained personnel and resultant higher labor costs, higher-priced equipment and facilities. The high prices being paid for beef have almost doubled the price of dairy cows. We must make it profitable to the dairymen to produce for us. Necessarily, we must increase our

E X P A N S I O N



THE Buflovak WAY

Yesterday's tiny crossroad cheese factory is today's sparkling, modern and, above all, PROFITABLE creamery products plant. BUFLOVAK Equipment has played a leading part in this transformation. Here is sound expansion . . . expansion based on product diversification . . . expansion based on quality production. Here's how it works:—

A BUFLOVAK DOUBLE EFFECT EVAPORATOR assures condensed and evaporated milks that always possess uniform texture, rich color and natural flavor . . . products that create consumer preference. And Buflovak affords top quality at rock-bottom cost. A 99.9+% solids recovery and a 50% saving in steam and cooling water are only two of the countless Buflovak operating economies.

A BUFLOVAK ROLLER DRYER for drying whole milk, skim milk and buttermilk completes the product diversification picture. Now you can meet any conceivable market demand with the Buflovak "two way stretch" to broader markets . . . increased profits.

The *Buflovak* Double Effect EVAPORATOR

The *Buflovak* ROLLER DRYER

BUFLOVAK EQUIPMENT DIVISION

OF BLAW-KNOX COMPANY

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295 Madison Ave. — New York 17
2217 Olive St. — St. Louis 3
1636 Monadnock Bldg. — Chicago 4
1706 Broadway — Oakland 12, Calif.

selling prices to absorb this increase. However, our own profits will not increase."

The last rise in Dallas milk prices — equalling the new boost—came last November.

Austin, Texas — The Ninety-Eighth District Court of Travis County, October 4, ordered six big milk companies and a milk producers association in South Texas to cease alleged violations of the state antitrust law.

The companies failed to get a ruling from Judge Charles O. Betts that their case was not subject to the state's antitrust laws. The companies involved are the Carnation Company, the Borden Company, Foremost Dairies, Inc., Lone Star Creamery Company, The Phenix Dairy, The Sanitary Farm Dairies, Inc., and The South Texas Producers Association.

The Attorney General alleges the milk companies have a monopoly of more than 97 per cent of raw milk produced in 50 Southwest Texas counties. Milk company attorneys argued that the injunction would "constitute a prejudging of guilt which the court is not allowed to do." They said such an order would be "so disruptive of the milk business in Houston it shouldn't be issued."

Daniel filed the suit September 22, only 10 days after Houston milk producers and distributing plants raised the price of raw milk to $7.15 per hundred pounds and the retail price to 24c and 25c per quart. The order, which may ultimately directly affect the consumer's price of milk, was effective immediately.

Judge Bett's ruling said "all other equitable relief" asked in connection with existing prices on Grade A raw milk and pasteurized and processed milk is withheld until final hearing on the merits of the case.

The order stops the defendents from "entering into any agreement, understanding or intentional concert of action" by which "prices are increased." It also halts any agreement by which the distributor's price is fixed.

It struck at the big South Texas Producers Association by ordering distributors to stop requiring milk producers to become members. It halted enlisting of members except in the South Texas milkshed and prohibited the alleged special distribution agreements through members of the association.

The order would stop any action to coerce any milk producer to stop selling or delivering milk to one distributor in order to send it to another. It forbids refusal of membership in the association to milk distributors who have sold to one of the defendents at least sixty days and who lives or keeps his herd in the milkshed area.

In a state-wide survey of larger Texas cities and some representative smaller ones, it was learned that although there is no acute shortage the supply is limited in some places.

Houston: B. E. Stallones, manager of the South Texas Producers Association, said no Grade A milk had been imported, but before many weeks imports will likely be necessary. He attributes the shortage to the summer drought and increasing population.

Austin: E. A. Moeller, general manager of one of Austin's biggest dairies, said that about 10% of Austin's supply is being imported, but in months to come 30 to 35% will be imported. This is the average rate but the heavier imports will arrive earlier than usual because of the summer drought.

San Antonio: dairymen admitted that the city's milkshed was not capable of supplying their full needs and they are drawing about one-fourth of their gallonage from import sources within the state. Last year, imports came to the Alamo City from as far away as Wisconsin, Minnesota and Ohio, and it is believed they will have to turn to these out-of-state sources this winter.

El Paso: dairymen are importing about 25% of their total from California, New Mexico and Sherman, Texas. They will be hard pressed when military installations in the area are staffed by 35,000 men in the near future.

Waco: Dr. N. M. Athins, director of the Waco-McLennan County Health unit, said the Waco milk supply was not adequate but no one was suffering.

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MINNESOTA

By VIRGINIA BEALS

THE PRICE OF FLUID MILK dropped one cent in Minneapolis September 22, reducing its quotation to consumers from 21 cents for the first quart to 20 cents; from 19 cents on each additional quart to 18 cents. Cream prices took a reduction at the same time, coming down from 21 cents to 20 cents a half pint on 20 percent cream; bringing the retail price of 30 percent cream from 26 cents to 25 cents a half pint.

Minneapolis was one of the first cities in the country to adopt uniformly such a price cut since the general price level began rising. The price cut was first announced by the Franklin Co-Operative Creamery Association. Northland Milk Co. and Ewald Dairy Company next adopted the price schedule and since that time practically all dairies have endorsed this pricing.

Distributors say the cut was announced because the price of butter and condensed milk has been falling. Condensed milk has dropped about 25 cents a case in the east and condenseries have reduced their payments to producers about 25 cents for a hundredweight of milk. When both butter and condensed milk prices fell during the first half of September, Minneapolis distributors gambled that prices they would have to pay formers would be lower. This information was given to the public through the press, but at the same time customers were warned that if this prognostication is not fulfilled, prices may have to be pegged up to their former level.

Dealers reported that they experienced little or no consumer resistance to fluid milk since the last price increase August 12 which had been in effect until the recent cut September 22.

Three hundred fifty dairymen, members of the Dairy Products Institute, gathered at the University of Minnesota College of Agriculture September 19 through 23 to be brought up to date on latest developments in milk processing, its products and noteworthy topics within the industry. Headline speakers at the institute meetings were: C. D. Dahle, ice cream technician, Pennsylvania State College; L. C. Thomsen, butter and dairy engineering specialist, University of Wisconsin; and Russell Fifer, executive secretary of the American Butter Institute.

The fifty-fifth annual convention of the Minnesota Creamery Operators' and Managers' Association met at the Nicollet Hotel, Minneapolis October 4 to October 6. At a post-convention meeting H. W. Koester, Clara City, Minnesota was elected president of the organization; Albert Camp, Clarks Grove, was given the post of treasurer, and Dean E. Fischer the office of field treasurer.

Minneapolis and St. Paul now pay lower prices for milk than any cities of comparable size in the country. The second retail price reduction of milk within two months for both home-delivered and cash and carry purchases became effective November 8 and Harry Leonard, secretary of the Twin City Milk Producers Association made the statement that he does not foresee an appreciable change within the next six months.

Minneapolis dairies have cut their prices to consumers one cent a quart for milk, one cent a half-pint for 20-percent cream, and two cents a half-pint for 30-percent cream with the resultant schedule now in effect for home deliveries: 19 cents for the first quart and 17 cents

(Please turn to Page 69)

Money is unimportant here!!

Land of Cockaigne (COCKAYNE). This is a modern artist's idea of that delightful paradise which was part of the folklore of Europeans many, many centuries ago.

This is the Land of Cockaigne.

It's a wonderful place where the houses are built of cake, and the shops are eager to give you their merchandise for free.

Here, roast geese and other fowl wander about inviting folks to eat them. Here, buttered larks fall from the skies like manna.

Wonderful place Cockaigne . . . this Land that's always free from want . . . where business cycles are unknown . . . where money is *un*necessary.

Only trouble is you won't find this mythical place on any up-to-date map of the world.

We live in a land blessed with plenty—true enough. But the rub is that we will always need hard cash to buy the things we want.

You will need money to make a good down payment on a new home . . . to send the children to college when the time comes . . . or to keep well-supplied with fine food and little luxuries when it comes time to retire.

One of the best ways you can assure yourself that you *will* have the money you need for the things you want later in life is to *salt away some of the money you now earn in U. S. Savings Bonds.*

These Bonds are the safest in the world. And they make money for you. Each $75 you save today will grow to $100 in just 10 years.

So start saving now . . . the automatic way, on the Payroll Savings Plan where you work, or buy them regularly through your bank or post office.

AUTOMATIC SAVING IS SURE SAVING—U.S. SAVINGS BONDS

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

North of Forty-Nine

A PAGE DEVOTED TO THE DAIRY INDUSTRY IN CANADA

ONTARIO HERD IMPROVEMENT

Kennedy Announces New Policy for Cow Testing — Associations to Be Set Up in Ontario

OTTAWA, Ont. — A new dairy herd improvement policy for the Province of Ontario is announced by the Minister of Agriculture, Hon. T. L. Kennedy, and is now in operation under the jurisdiction of the Live Stock Branch of the Department of Agriculture. This new policy is based on a systematic adoption of cow testing by co-operating groups.

In announcing this new policy, the Minister stressed the fact that successful dairying depends on the ability of the farmer to apply the basic principles of breeding, feeding and weeding, and that before these principles can be translated into action, the dairyman must have definite knowledge regarding the milk production of each cow in his herd. Without this information, he is forced to resort to guesswork when choosing those animals that should be retained and those that should be weeded out of the herd. For this reason, the new dairy herd improvement policy is based on a system of cow testing, both for individual animals and herds, and it is to be carried out through Dairy Herd Improvement Associations to be formed throughout the province. The regulations governing this new policy, in brief, are as follows:

The Dairy Herd Improvement Policy shall be applicable in any area of the Province of Ontario where a dairy herd improvement association is organized and approved by the Live Stock Commissioner. The association shall consist of not less than 30 and not more than 36 members. It is not required that all members reside in the same county, and there shall be no limit to the number of associations in a county. Members shall be restricted to owners of grade or mixed herds, who own at least ten cows, and if a herd contains more than 30 cows, the owner will be required to enter two herds and pay two membership fees. All herds are required to be tested for T.B. by the Dominion Government, and a pure bred sire must be used.

The Ontario Live Stock Branch undertakes to provide a supervisor for each dairy herd improvement association, and he shall visit each member eight times a year, without advance notice, and as far as possible at intervals of six weeks.

Each member is required to own an approved set of dairy scales, and to weigh and record the weight of each milking on sheets supplied for the purpose. These sheets must be sent to the Live Stock Commissioner within five days of each month. Each cow in the herd, except those maintained for nursing calves, must be placed on test. The owner is required to provide board and lodging for the supervisor while visiting the farm, and to provide transportation to the next farm. He must also co-operate with the supervisor in obtaining data relative to the cost of producing milk in his own herd, to maintain records relative to the breeding and calving dates of each cow in the herd. Each member is required to pay a membership fee of $10.00.

At the time of each visit, the supervisor will weigh the milk of each cow and take supplies of each for a composite sample for the Babcock test. He must provide a suitable box and sampling bottles and conduct the test for butter fat before leaving the farm. Should he live in the community the tests may be made at his home. He has to compare the owners scales with his own, and in the event of inaccuracy, may require the owner to buy a new set of scales. He is also required to record date relative to the cost of producing milk on the farm of the member. Each grade cow and heifer must be identified by ear tag, and all heifer calves must be so identified before they are three months of age. He must also record the date of birth, name of sire and identity of dam of each grade heifer calf.

Full details of the plan can be secured from agricultural representatives, or from W. P. Watson, Ontario Live Stock Commissioner, Department of Agriculture, Parliament Building, Toronto.

TAGGING FOR MILK FUND

Taggers collected money in London, Ontario recently for the local Progress Club's annual milk fund drive. The money collected will be used for milk for undernourished children in the city's schools. The objective for the year is $2,500; sufficient for 70,000 bottles of milk.

DOMINION DAIRY HANDICAPS

Poor Pastures, Loss of Cattle to U. S. Cited as Causes of Decreased Milk Production in Canada

OTTAWA, Ont.—The "alarming" flow of milk cows from Canada to the United States and poor conditions of fall pasture are obstacles facing the dairy industry of Canada in efforts to build fluid milk production. Industry authorities anticipate some slight improvement in milk flow this winter.

Attractive prices offered by American buyers for steady producing stock are drawing increasing numbers of cattle from dairy ranches in Ontario and Quebec, particularly from the cheese and butter producing areas of the two provinces. Conditions at present leave little hope for improved domestic supply in either the cheese or butter industries as already numerous cheese factories have closed operations for the season.

The brightest spot in the Canadian dairy industry is the abundance of hay and corn feeds which assure the producers of adequate feed to carry stock and maintain production during the winter months. At present there is a far better outlook for winter fluid milk production than at the same time last year, but in all probability output will be consumed for fresh milk supply and for requirements of condensaries.

Cheese production has been the hardest hit division of the industry with Dominion production being off 26.7% in the first nine months. Largest drop has been experienced in Quebec where output has fallen 45%. Ontario's decline in output is estimated at 22%.

The two-cents-per-lb. subsidy paid on milk production for manufacture into cheese has failed to boost volume of output in the industry.

ICE CREAM TAX

The Dutch government recently imposed a 15% luxury tax on the sale of ice cream. The ice cream industry is making strong protest against this tax and has demanded that it be rescinded on the ground that ice cream is a food.

DAIRY SHORT COURSE

University of Manitoba Will Present Lecturers of High Standing at the 31st Annual Short Course

WINNIPEG, Manitoba – The 31st annual Short Course at the Dairy School of the University of Manitoba, Winnipeg, will be from January 3rd to March 25th, 1949.

The lecturers for this course are: – R. W. Brown, Professor of Dairy Science, in charge of the Dairy School; G. C. Hodgson, Associate Professor of Poultry Husbandry; J. B. Brown, Associate Professor of Animal Science; G. L. Shanks, Professor of Agricultural Engineering; M. C. Jamieson, Assistant Professor of Bacteriology; T. L. Forster, Assistant Professor of Dairy Science; J. J. Janzen, Lecturer in Dairy Science; A. N. Oullette and H. R. MacRae of the Manitoba Dept. of Agriculture.

In addition, officers of the Manitoba Dairy Branch, the Dominion Dairy Produce Grading and Inspection staffs, the City of Winnipeg Health Dept., and a number of Winnipeg dairy plant operators will assist by giving lectures and demonstrations.

The Course is planned to give as thorough a training as time permits in the principles and practices of the dairy industry, with particular application to Western conditions.

About 70% of the time is spent in practical work, and 30% is devoted to lectures and discussions. Not more than 10 students are taken in a laboratory class, so that they get a great deal of individual attention from the instructor.

The Laboratories of the University Dairy Building are well equipped for teaching the work outlined. A regular supply of milk and cream is handled by the Department of Dairy Science in order to furnish the cafeteria with dairy products and provide material for investigation and instruction.

Certain dairy firms and organizations donate substantial cash prizes each year for competition by dairy students. Several dairy publications annually offer subscriptions to their journals to the students obtaining the highest standing in certain subjects of the course. A cream grading and a butter scoring contest, which Dairy School students are eligible to enter, are held each year in connection with the Manitoba Dairy Convention. The Lawrason Trophy is offered for annual competition in the Dairy School and will be awarded to the student who shows the best attitude towards his work.

Examinations are held during the last few days of the course. Short tests are also given from time to time during the session. A minimum of 40% on written work and 60% on practical work constitute a passing standing. If a student is successful in passing the prescribed examinations and has had sufficient practical experience, he will be granted a Diploma in Dairying.

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WOMEN PETITION COMMISSIONERS

MONTREAL, Que.–Accompanied by members of the Canadian Association for Women Voters, Mrs. Therese Casgrain presented the following brief to president and members of Dairy Commission of the Province of Quebec:

"The Canadian Association of Women Voters, a non-party organization, whose object is the promotion of citizen interest in government and in general social welfare, wishes to make the following representations to the Dairy Commission in view of the threatened further increase in the price of milk.

"Because milk contains more of the basic elements required for adequate nutrition than any other feed available, we urge the social necessity of maintaining the health of the Province, especially of the growing children by insuring adequate consumption of milk. The high cost of other food products makes it all the more necessary to hold down the price of milk, so that, at least, minimum standards of nutrition will not be reduced.

"This organization has, during the past year, made a considerable study of milk production and distribution in the province, and upon the basis of its findings, it concedes to the milk producers, the work on low wage scales and on narrow profit margins, the apparent necessity of meeting increasing costs as they are proven. We are not satisfied, however, without further investigation of the distributors position, that they should be protected by a fixed price, we have in mind the question of their costs and possible economics."

KIDS LOSE FRIENDS

There was sadness among Saskatoon's younger fry.

Recently the Co-operative Creameries barn burned and 29 of the horses that pulled the milk wagons died in the flames.

In the morning over the Creameries office phone came call after call:

"Was Maud saved?"

"My little girl gave Ruby sugar every morning. Is she all right?"

All the office could say was that Sandy and Lady, both fairly young horses, were the only survivors.

COMPLETE PASTEURIZATION

Ontario Sanitation Engineer Reports No Milk Borne Disease for Past 10 Years in Province

TORONTO, Ont.–Complete or compulsory pasteurization of Canada's entire milk supply is on the way, an Ontario Government sanitation engineer says.

Dr. A. E. Berry told the Health League of Canada that Ontario is the only province that has adopted compulsory pasteurization, but "it is obvious that the provincial departments of health, as well as other agencies, are working steadily towards complete pasteurization."

He said it may be expected that further action will be taken in these places in the near future.

No milk-borne diseases had been reported in Ontario during 10 years of compulsory pasteurization, he said in a report to the Health League. He gave the following figures for pasteurization in the other provinces:

Nova Scotia, 80 percent; New Brunswick, 85 percent; Quebec, 80-85 percent; Manitoba, no figures available; Saskatchewan, 74 percent; Alberta, 34 percent; British Columbia, 75-95 percent.

Although no complete figure is available for Manitoba, 95 percent of the milk sold in Winnipeg is pasteurized and a number of smaller cities have passed by-laws for compulsory pasteurization.

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OPPOSE PRICE BOOST

TORONTO, Ont.–Demands of farmers for an increased price for their milk have not been met so far by Ontario Milk Distributors Association, now negotiating with producers for a renewal of milk contracts.

Bruce Scott, general manager of the distributors, said that meeting after meeting has ended without satisfactory agreement because distributors "are making every effort to prevent a consumer rise."

Although Oct. 31 was set as the date milk contracts should end, it was decided last November by distributors and producers that contracts would not be renewed until a new agreement was drawn "come Oct. 31 or not."

"I can't see any immediate increase in consumer prices." declared Mr. Scott, "but the two groups are still negotiating," he added.

There have been "strong demands" by farmers for an immediate increase.

Roy Lock, secretary of Ontario Milk Producers' Association, said he "made no suggestion of what an increase would be, if there was one." The producers are studying their costs and "there is no cause for alarm" that there would be a price boost.

ADA WHITE CHRISTMAS CAMPAIGN

ADA and Peach Group Join Forces to Blanket Nation with Advertising and Merchandising in December Sales Push

DAIRY FOODS will present a "White Christmas" to the buying public all over America during December. Whipped cream in a "Yuletime Fruit Bowl" and a "Snow Queen Salad" and ice cream in a Confetti Sundae will be co-starred with fruit cocktail to delight the appetite of young and old.

This holiday sales parade again unites the campaign forces of two of the nation's leading producer organizations—the American Dairy Association and the Cling Peach Advisory Board.

It's a holiday sales bell-ringer! It's something new and thrilling in Christmas advertising for the dairy industry. December "whipped cream" advertising of fruit cocktail canners and other related food manufacturers will intensify the resounding ring of ADA advertising dollars that so clearly "Say It With Sales."

Life Ad Leads Off

Spearheading the drive will be the colorful full-page ad in the December 6 issue of Life Magazine taking its powerful sales appeal to 27½ million readers. Ads in Better Homes and Gardens and Woman's Home Companion will spread the advertising coverage to another eight million food shoppers.

Featuring "Cream for Christmas," the ad illustration portrays an eye-stopping, taste dish of fruit cocktail surrounded by a ring and surmounted by a mound of fluffy whipped cream. The copy panel gives recipes for "Festive Fruit Bowl," "Holiday Fruit Salad," and " Confetti Sundae."

Key market centers across the nation will be covered with full-color "Snow Queen Salad" ads in metropolitan newspapers and Sunday supplements the last weekend in November, as the Cling Peach Advisory Board channels its "Whipped Cream, Fruit Cocktail" sales campaign to millions of daily newspaper readers.

Newspapers Follow Through

Full-color "Snow Queen Salad" ads, emphasizing whipped cream, will appear in American Weekly, This Week, Columbus Dispatch, Denver Post, Houston Chronicle, Louisville Courier Journal, Nashville Tennessean, New Orleans Times Picayune States, New York News and Philadelphia Inquirer.

Black and white "Snow Queen" ads will cover the country in daily papers from border to border, scheduled in 26 of the nation's leading papers in heavily populated areas. The ad barrage will appear in the food editions the last weekend in November.

A new and original dish, "Snow Queen Salad" has a whipped cream base and is topped with a heaping mound of tempting whipped cream. It looks and tastes "Christmasey." Arrangements are complete for featuring this new dish in many restaurants across the nation.

Point of purchase materials designed to cream and ice cream as star ingredients of the salad and confetti sundae include: menu clip-ons, back bar strips, posters and recipe leaflets. All are available to milk distributors, ice cream manufacturers and food stores through the American Dairy Association.

ADA will boost whipped cream with this attractive ad scheduled to appear in the December 6th issue of "Life" magazine. Other similar ads will appear in national publications throughout December reaching a total of 35 million readers.

Full-Color Leaflets Available

The recipe leaflet is printed in beautiful colorwork on both sides. The "White Christmas Cocktail" is invitingly displayed in "word-and-picture" on the front side and the "Snow Queen Salad" is spotlighted in full color on the opposite side. Available at cost $2.75 per thousand.

Striking full-color posters highlighting the "Snow Queen Salad" are available without charge, size: 14x20 with 8 inch imprint space. Poster is keyed to food store and fountain use.

Menu clip-ons carry a colorful taste-tempter to the customer suggesting "Whipped Cream Fruit Cocktail" as a delicious dessert. Clip-ons are being distributed through campaign headquarters at $1 per thousand.

Strip-Teasers-In Taste

Four-color back bar strips for fountains, restaurants and use above ice cream cabinets display the confetti sundae in sales-making fashion. White space flanking the illustration on both sides permits imprinting with brand name and special

A Friend In Need

Brattleboro, Vermont—Every now and then, somebody, somewhere, puts human kindness into action in a way that's mighty discouraging to those who constantly strive to prove that "people are getting meaner every day."

Such an incident was the splendid spirit shown by a grand group of 4-H youngsters in Pueblo County, Colorado, this fall.

Eddie Cortner, 12, had a great ambition. He wanted to start a 4-H Club Dairy project . . . and to get that start, he'd planned for years to enter, (and win) the Catch-It-Calf Contest held in connection with the State Fair. The rules are simple . . . calves are freed in the arena and aspiring youngsters chase them, catch them (no easy matter) and take them home for keeps. Later, the calf-catching youngster reports his progress to the donor.

This was to be Eddie's year . . . but in a tractor accident last summer, Eddie lost his leg. Gone were Eddie's hopes and dreams . . . almost!

His friends got together. Several 4-H clubs in the community, under direction of Mrs. H. A. Rupert and Mrs. A Caffey, gave a dance, at which music and hall were donated. They went to Diamond Farm Dairy and through the generosity of Joe Gersick, owner, and a former 4-H member himself, purchased "Diamond Farm Security", purebred Holstein heifer, for one-third her value. Local businessmen contributed a halter, blanket and feed.

At the State Fair this year Eddie was presented with his calf under "Catch-It-Calf" rules.

Eddie's dreams don't end with the Catch-It-Calf Contest. He wants to build a Holstein herd of his own and establish a future for himself. So far he has a good foundation to work with . . . a top-notch calf and many friends! !

selling message. These "strip-teasers" for the asking without cost.

Another silent salesman being introduced for the first time in this "White Christmas" campaign for dairy foods is the milk bottle hanger. It carries the "Snow Queen Salad" in color and allows for the distributor's imprint.

To push the campaign on the local level, radio spot announcements, newspaper mats and drop-in halftones are available through ADA headquarters. All are designed to sell more whipping cream and more ice cream.

Packers, Brokers Join Drive

Augmenting the December drive will be the sales organizations of more than 175 canners of fruit cocktail together with their brokers. Going heavy for institutional business, these brokers and their corps of salesmen are urging restaurants, hotels, luncheonettes, fountains and similar institutions to take advantage of the opportunities this campaign offers to please customers and ring cash registers. Enthused about the "White Christmas" campaign, Owen M. Richards, general manager of the American Dairy Association, says: "Here's a sales package for the dairy industry. The tremendous impact of this campaign can and will do a big job in merchandising cream and ice cream at a time of year extra business on these products counts. It will be a gift in sales to those who crowd this holiday sales opportunity by identifying their own brand when using the tie-in material now available."

Here, a little "doe" affects a lot of "bucks"

5-POINT CAN WASHING PROGRAM really saves you money!

Yes, use the Diversey 5-Point Can Washing Program and you're certain to save on can washing labor and material costs! In addition, you also profit through cleaner, bacteria-free cans which result in more satisfied producers and better quality dairy products!

And, now is the time to install the Diversey 5-Point Can Washing Program . . . now that milk receipts are at a minimum and equipment is not in constant use! So call your Diversey D-Man today. He will be glad to make a complete, cost-free survey of your can washing operation . . . an essential, practical survey which includes the following 5 points:

1. Check can washing machine for mechanical defects!
2. Remove hard water scale from can washing machine!
3. Install Diversey's automatic feeder to control strength of cleaning solution!
4. Remove milkstone from producer cans!
5. Recommend most efficient, economical cleaning and disinfecting methods and materials!

Take advantage of the unique, proved Diversey 5-Point Can Washing Program! *Call your Diversey D-Man now or write:*

THE DIVERSEY CORPORATION
53 W. Jackson Blvd., Chicago 4, Ill.
In Canada: The Diversey Corporation (Canada) Ltd., Toronto

ICE CREAM PREFERENCE TESTS

By **S. P. LUCAS**

Michigan Agricultural Experiment Station

Reprinted from Experiment Station Quarterly Bulletin, August, 1948.

SCORE CARDS have been used for at least 50 years as a device for measuring quality in dairy products. These have been standardized in several states, and, for the scoring of ice cream, a maximum of 45 points is allowed for flavor. While this allowance applies to that flavor imparted to the product by agents such as extracts, it also includes the flavor, good or bad, given the ice cream by the dairy products used in the mix. It is therefore fallacious to consider the extract used in ice cream as all-important, since the heavy allowance permitted flavor on the score card must be shared by the flavor of the other products used.

Flavors and extracts are used to enhance the flavor supplied by fruit or other products. This is desirable, owing in part to the effect of cold temperatures upon the sensory nerves registering flavor. Low temperatures reduce volatilization of flavors and result in dull recording of the flavor on the nerve endings. An extract reinforces the flavor supplied by the fruit. The cost often cuts the use of optimum amounts of flavors and the same reasoning applies much more forceably to the use of fruits. The use of excessive amounts of fruits in ice cream increases the coarseness of the ice cream, cuts the cream's ability to assume overrun, and lowers its freezing point. The customary amounts of fruits to use range from 1 to 3 quarts for 5 gallons of mix.

Flavors used to reinforce fruits may be composed of materials derived from the fruits themselves, in which case they are referred to as true fruit extracts, or they may be composed of synthetic products and mixtures of oils, ethers, chloroform, alcohol, etc. The flavor of the fruit is usually contained in the essential oil of that fruit. To date, some 10 to 14 known ingredients have been isolated, each of which modifies and blends with the other individual ingredients. Many different flavors contain the same ingredients but in different proportions. In this study, an answer was sought as to whether the public prefers a pure flavor or an imitation flavor in ice cream. The search was limited to two flavors, vanilla and strawberry.

Vanilla

The taste of vanilla extracts depends largely upon the locality in which the vanilla bean was grown. According to the United States Pharmacopeia, a single-strength vanilla must contain the extractive matter from 13 1/3 ounces of beans per gallon. Stronger extracts may be made, usually in multiples of the amount used in single strength, and are referred to as concentrates. These are pure extracts, whether of single or multiple strength. An imitation flavor, according to the standards, is one made up entirely of synthetics or of pure vanilla with reinforcement, as with added vanillin and coumarin. In this report, only pure and imitation liquid extracts were used, although powdered flavors and emulsions are on the market. Isolated in 1860 by German chemists, vanillin has a wide usage in flavors. Its flavor somewhat resembles that of vanilla. It is found in all vanilla beans and is partially but not wholly responsible for vanilla flavor. It may be made synthetically from oil of cloves, coniferin, or sulfite liquor, and is used frequently to reinforce vanilla extracts and to make imitation vanilla. The so-called Tonka blend vanilla is made by adding to vanilla, extract the extract of the Tonka bean or by the addition of synthetic coumarin, which is the flavoring principle of the Tonka bean. It lends an aromatic flavor but does not closely resemble vanilla. This modification is said to be used chiefly in the South, although before the passage of the flavor law, it was used in Michigan. Either of these two synthetics, when added to pure vanilla, greatly increases the flavoring power of the vanilla. Formerly it was claimed that pure flavors would freeze out of ice cream and that the addition of these synthetics would prevent this. That claim has been disproved, however.

Tests with Vanilla

Ice cream was prepared with five types of vanilla. These types and the amounts used for 5 gallons of mix were as follows

1. Pure Mexican-Bourbon bean extract, 4 ounces.
2. Pure vanilla reinforced with vanillin, ¾ ounce.
3. Fortifier, 4 ounces.
4. Pure concentrated vanilla reinforced with ¼ ounce coumarin per gallon.
5. Imitation vanilla, 2 ounces.

Number 1 contained the extractive matter from 60 percent Bourbon beans and 40 percent Mexican beans. Number 2 was a Bourbon and Mexican bean concentrate containing 1 ounce of vanillin per gallon. Number 3 was an imitation composed of vanillin, St. John's bread, ethers, esters, gum, coloring, alcohol, and glycerine. Number 4 was a concentrate of combined Bourbon and Mexican beans containing 1 ounce of coumarin per gallon. Number 5 was an imitation made up of the same materials as number 3 but in different proportions.

The ice creams were made from the same mix and were of a standard such as is commonly used in this state. A sample of each was placed on a paper plate with a number. These plates were passed out to individuals together with a slip of paper, and they were asked to sample carefully each one by themselves and to rate them according to quality. They were asked to do this individually to eliminate the possibility of their being influenced by the opinions of others. While it is doubtful that these scorers gave the matter as careful attention as would a trained judge, it is believed that in most cases a considered opinion was given.

Forty-four persons sampled each of the five types. A record was kept of the number of people placing each type first, second, third, fourth, or fifth. This is referred to as its

TABLE 1—RESULTS OF SCORING VANILLA ICE CREAMS

Rating	Sample Number 1		2		3		4		5	
	Judges so rating	Total score	Judges so rating	Total score	Judges so rating	Total score	Judges so rating	Total score	Judges so rating	Total score
First	11	11	13	13	5	5	5	5	10	10
Second	13	26	5	10	10	20	8	16	8	16
Third	10	30	5	15	6	18	14	42	9	27
Fourth	3	12	9	36	14	56	8	32	10	40
Fifth	7	35	12	60	9	45	9	45	7	35
Total	44	114	44	134	44	144	44	140	44	128

placing. Each placing was then rated by multiplying the number of people placing it by the placing itself. Thus of three people placed number 1 sample fourth, the three was multiplied by four to get the rating. That sample having the lowest rating, therefore, would rate first. These ratings are reproduced in Table 1.

The number 1 sample, which was pure vanilla, easily placed first with 114 points. The number 5 sample, imitation vanilla, placed second with 128 points. The number 2 sample, which was pure vanilla reinforced with vanillin, placed close to the number 5 sample, with 134 points. The number 4 sample, which was pure vanilla reinforced with coumarin, was a poor fourth and the number 3 sample, which was a fortifier, placed last.

These tests were made entirely by the general public and they would indicate that there are many people who dislike imitations. It would perhaps not be too farfetched to conclude that people like those products to which they have become accustomed. In the pastry industry, many imitation flavors are used, and many imitation flavors are sold to the housewife for use in the home. It is perhaps not too far from the truth to say that a good imitation may be better than a poor extract. A pure extract may be made from Tahiti beans which will yield a flavor characteristic of the vanilla extract but inferior to many good imitation flavors. The results of the scoring, however, show that a majority of the people prefer a pure extract so far as vanilla is concerned and that the manufacturer of ice cream hoping to stay in business will probably find the use of a pure extract to be more economical than use of an imitation flavor in the long run. He will find it still more profitable if he extensively advertises the fact that he uses nothing but pure flavors. It is a goal which the larger, more progressive manufacturers have set as their aim and toward which they direct their advertising.

Tests with Strawberry

Following the procedure described in studying vanilla extracts, the public taste regarding strawberry flavorings was scrutinized.

The following extracts were added to a strawberry ice cream containing 3 quarts of strawberries for 5 gallons of mix. Such an extensive use of fruit, it is realized, would make less noticeable the type of strawberry extract used to reinforce the flavor and might therefore make less noticeable differences between the types used.

1. True fruit strawberry extract, 3 ounces.
2. A second true fruit strawberry concentrate, 1 ounce.
3. A strawberry flavor, single strength reinforced, 3 ounces.
4. Imitation strawberry flavor, 2 ounces.
5. A special imitation strawberry, 3 ounces.

Number 1, listed as a true fruit strawberry, actually contained 75 percent true fruit strawberry plus 25 percent true fruit raspberry. Both of these ingredients were concentrates. The second was also a true fruit strawberry concentrate. Number 3 contained a natural strawberry concentrate reinforced with a natural raspberry concentrate. Number 4, the strawberry imitation, contained imitation oil of strawberry, natural oil of lemon, ethers, natural raspberry concentrate, and alcohol. Number 5, a special formula imitation, contained natural raspberry concentrate, imitation oil of strawberry, oil of orris, other essential oils, vanillin, acetic and other ethers, esters, aldehydes, sugar, glycerine and propylene glycol.

The scores obtained in judging the strawberry flavorings were divided, according to the judging personnel, into two classes, experienced and inexperienced. Scoring was done in a manner identical with that for vanilla. The latter, inexperi-

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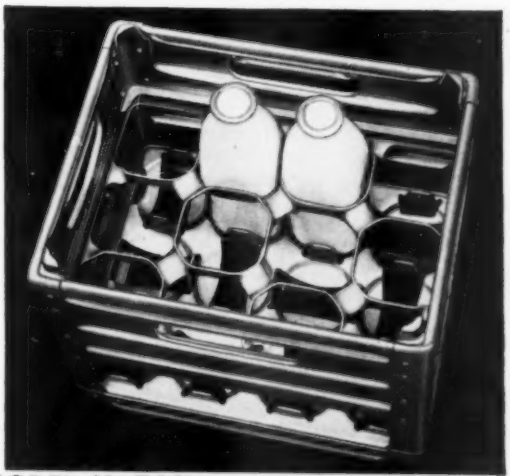

MODEL No.760 For 12 Quart Size Square Bottles

C. E. ERICKSON CO., Inc.
DES MOINES 7, IOWA

enced scorers, placed number 1 sample, pure strawberry, with a score of 56, first. Number 2 sample, pure concentrate, rated second with a score of 67. Number 3, pure reinforced, scored 68. Number 4, imitation, scored 75 and number 5 placed last. This form of rating, it should be stated, places samples closer together than would a straight score card method of rating.

Since the scorers were inexperienced, however, it was impossible to use a rated scale such as given on the score card. Twenty-three inexperienced scorers were used to compose the inexperienced group. Fifteen scorers composed the experienced group. Their placings were 1, 3, 2, 4, 5, whereas that of the inexperienced group was 1, 2, 3, 4, 5. The scores given by the inexperienced group were respectively 32, 44, 45, 49, 55. Numbers 2 and 3, therefore, were extremely close and for all practical purposes, the rating of the two groups of scores was the same. It will be noted that the imitation samples placed a poor fourth and fifth. Since number 3 contained no imitation products but rather a true fruit strawberry flavor reinforced with a true fruit raspberry flavor, the placing made by experienced judges is not surprising. Placing of this material over number 2 by one point only would suggest that the blend of true fruit materials was a very good one.

The results of this study in Michigan, where the use of pure flavors has been required for several years, show a much greater appreciation of a flavor true to the fruit represented than would be expected. It should be a source of encouragement to manufacturers seeking to manufacture the best possible ice creams.

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KNOW YOUR MACHINE CAPACITIES

(Continued from Page 46)

such bottlenecks exist in our own plants no amount of study and work designed to secure greater machine capacity will yield any results. Experience has shown that any such effort to secure greater production capacity must start with a determination to locate every possible bottleneck and eliminate it from the production line before going on to capacity improvement.

Study Machine Loading

We must also bear in mind that every job alloted to a machine decreases its capacity for additional work in a given period of time. Machine loading also requires considerable study and it too must be considered in our survey of machine capacity in our plant. The solution of most such preliminary problems as mentioned in foregoing paragraph is the primary step to take in studies toward increasing machine capacities.

Experience has also shown that it is wise to study the degree to which overload or underload occurs on particular machines or classes of machines in our plant.

When temporary overload conditions occur we can remedy these by working on over-time schedule or by re-routing the extra load to other machines but solution of a persistent overload problem has to be met by additional equipment, alteration of production methods or possibly by subcontracting outside of our own plants.

Underload can arise from either poor planning or insufficient work for the unit or units in the plant and most often occurs because production personnel has either no machine and plant capacity records at all or is working with a set of records based on data secured from sources other than experience within our individual plant itself.

Either overload or underload is costly. There is no excuse for these conditions in our plant today. Keeping them out is a much easier task when we have a completely accurate basis of information on what not only each unit in our individual plant can do but on the total productive ability of the plant as a whole, based on these records of individual machine capacities.

●

Atlanta Firm Is A Leader

There are those in the dairy brotherhood who look to the South as the coming dairy region. Obviously the climatic factor which would allow a year round pasturing program offers an advantage that other areas would find hard to beat. As yet, however, the problem of finding grasses that will stand up under summer heat has not been completely solved. Furthermore, the transition from a one or two crop system of agriculture is a slow process.

Some splendid progress has been made. Last month the *Review* carried a story on the Brownlee and Lively dairy operation in Atlanta, Georgia. Here a herd of more than 100 fine animals has been developed. Recently 40 registered Guernseys were added. Utilizing modern production techniques coupled with a sound nutritional and sanitary program the dairy has become one of the outstanding establishments in the South.

J. H. Lively, Atlanta dairyman appears to enjoy showing two of the sires that form the basis of an outstanding herd. Many students of the dairy industry see a bright future for milk production in the south.

●

MILK GOES TO ALCATRAZ

(Continued from Page 38)

Service inspector over here several times a month. He checks not only on the quality of the milk, but also on the plant method of handling and all that. They take bacteria counts and butterfat tests. The sure take care of their babies."

"Don't say it," I pleaded. "I'm not supposed to glamorize the life on the Rock".

I asked about the civilians at Alcatraz. "I understand there are some ninety civilians there in addition to some 200 or so prisoners. Do you supply the milk for them too?"

"Yes, we send some cartons over for their commissary. They have a small store there, a kind of PX, where they can buy things. But that's not under Government contract. Doesn't amount to much either."

The interesting fact emerged that among the civilians—families of the guards—there there are a great number of small children who actually live on the Pelican Island. Most of the

milk they get is bought directly by the guards and their wives in San Francisco. The children go to school to San Francisco every day on the little launch, come back in the afternoon.

I learned that Spreckels Russell had the contract several times before. Since the bids are made monthly, the supplier changes quite frequently. I was shown around the plant and watched the cartons as they slid down the chromium chute, one by one, made a final twist before they were filled up and then put in wooden boxes by hand. The Manager pointed to a truck with racks filled with 10-gallon milk cans. "These are the trucks that take the milk to the pier every morning, where the federal launch picks it up," he said. The cans had markings from all over California—Sacramento; Boweys; Los Angeles; Valleyford Creameries. "I don't see any marked 'Alcatraz' ", I said.

Mr. Vahlow waved his hand. He seemed to have doubts about how much good publicity would be.

Becoming something of an expert on criminal dairying, I asked him if his company supplied the milk to other prisons. "How about San Quentin?" He didn't know anything about San Quentin, but I was getting interested. I called up Warden Clinton T. Duffy long-distance to San Rafael on the far side of the Bay.

San Quentin is the largest California State Prison—it is, in fact, probably the largest in the country. California always claims records—Alcatraz the toughest, San Quentin the most populous of the nation's large scale clinks (or let's say jugs, writing a milk article).

"How many prisoners do you have there?" I asked.

"Four thousand five hundred and fifty at the moment. They get 4,000 gallons of milk weekly, 11¾ gallons per man per three-month period, or a pint a day. They also get 700 pounds of cheddar cheese, 56 pounds of butter and 350 pounds of cottage cheese weekly. Is that what you want to know?"

"That's what I call cooperation," I complimented him. "What kinds of milk do you use?"

"Mostly homogenized; 3,200 gallons. We also use 35 gallons evaporated and a thousand pounds dried milk. These are all weekly figures."

I did some quick figuring. "That totals more than the 4,000 gallons you said in the beginning."

"Two hundred and thirty-five gallons are for our civilians."

"How many of those do you have? Any kids?"

"We have one hundred and fifty non-prisoners and two hundred children including sixty small babies."

"How do the babies get their milk?"

"Borden Company delivers individual purchases."

"And the prisoners? Who supplies the milk for them?"

"We have our own cows which supply the milk for the main use of the inmates from our own prison ranch. We also have a canteen which is stocked by Bordens."

"How do you use the milk?"

"Half for cooking, half for drinking; some for coffee. Say, what is this all about? What do you want to know all this for?"

Maybe it was just my imagination, but his voice reminded me suddenly of iron bars and gray walls.

"I'm just a nosey reporter," I explained. "Thanks a lot, Mr. Duffy."

I quickly hung up. True, I wanted to learn all there was to know about how prisoners around the San Francisco Bay get their milk, but there are limitations on just how far a newspaperman will go to get his information.

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DR. ROBERT F. HOLLAND

Problems of the Industry

DR. JAMES C. WHITE

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review". Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

●

Ropy Milk

QUESTION—For several years we have had no trouble with ropy milk; in fact we had practically forgotten about it. Recently, however, we have received several complaints that our pasteurized bottled milk is ropy. Can you give us any information that will help us to eliminate this condition?

C. E. C., New York.

ANSWER—Ropy milk may occur during any season of the year but it causes most trouble during the spring and fall. In order to be sure that *ropy* or *slimy* milk is not confused with *gargety* or *stringy* milk, it might be well to state that stringy milk is due to infection in the cow's udder; namely, mastitis. The milk is stringy at the time of production. Ropy milk, on the other hand, is caused by the growth of certain bacteria introduced into the milk after it leaves the udder. Ropy milk, therefore, does not occur until after a storage period of twelve or more hours.

The bacteria causing ropy milk are widespread in nature. They are found on grasses, hay, fodder, and bedding, and in wet swampy areas in pastures, barnyards, and similar places. The organisms may be found almost anywhere in cow stables, in the water in drinking cups or troughs, in the water in cooling tanks, in dairy feeds, and the like. Milk equipment on farms is *very commonly* contaminated with the organisms causing ropy milk. Work done by the Department of Dairy Industry, at Cornell University, in New York and neighboring states tracing sources of the bacteria responsible for ropy milk outbreaks, has shown conclusively that most of the difficulty in recent years lay in improperly sterilized milk handling equipment.

Bottled milk showing ropiness means that the bacterial count was high when ropiness was observed and that the plant equipment is probably contaminated with these organisms. In general, pasteurization kills the bacteria which are the common cause for ropy milk.

Probably the first thing to do to eliminate this condition is to sterilize thoroughly every piece of equipment with which the milk comes in contact in the plant. Even though you may feel that the equipment in your particular case can not be the cause for the excessive number of ropy-milk bacteria getting into the milk, it has been found to be good practice to follow one of the recommended methods of sterilization. Any method is satisfactory if properly carried out. Sterilizing as much of the equipment as possible by steaming for at least five minutes or by submerging in water above 170°F. for the same length of time (five minutes) has given satisfactory results. Another satisfactory method of sterilization is to rinse every piece of milk equipment with a hypochlorite (chlorine) solution containing between 100 and 200 p.p.m. (parts of available chlorine per million parts of solution). "Chloramine T" solutions should contain 200 to 300 p.p.m. One of the new quaternary ammonium compounds used in recommended concentration is also satisfactory. The equipment should remain in contact with these solutions for at least two to five minutes. The equipment must be absolutely clean before sterilization.

If you are going to use a chemical such as the above as a sterilizing agent, it is absolutely essential that its concentration in the solution be known. Experience has shown that this last point cannot be over-emphasized. Testing outfits may be purchased from many dairy supply houses at a small cost. One cannot rely upon the strength of the chemical as indicated on the container after the product has aged.

Since quite a bit of the raw milk sold contains ropy milk bacteria to a more or less extent, it is well to be sure that there is no raw milk getting into the pasteurizer after the milk is up to the pasteurizing temperature. If the raw milk line to the pasteurizer is not disconnected during the pasteurizing process, I would suggest such a safety measure. I assume that you are also sure that no milk is leaking from the pasteurizer into the line to the cooler during the holding period.

Are the bottles thoroughly sterilized? Do you suppose that the cooler is leaking letting water containing ropy milk bacteria into the pasteurized milk? Is water dripping from pipes or a ceiling and in any way getting into the pasteurized milk? Are you using any small pieces of equipment such as dippers, stirring rods, measuring sticks, and the like which are not sterilized just the same as the rest of the equipment every time such pieces are used?

If, after thoroughly checking each item I have suggested and you are positive that you have very thoroughly carried out the equipment sterilization, you still experience ropy milk in the finished product, please let me know.

May I again emphasize that our experience shows that most ropy milk can be eliminated by proper plant practice. This means watching some of the less noticeable things as well as major operations.

Hold-Over Milk

QUESTION—Am enjoying your column in *American Milk Review*.

Perhaps you could help us.

We have a habit (lamentable, I believe) of holding a quantity of milk over to get an early start the following day. Fresh milk is dumped in this old milk. I break the chain every week when I am on this job, but think it should be broken every day.

What do you think?

J. S., Ohio.

ANSWER—We are in hearty agreement with you when you lament the practices in your plant. It is very often necessary that milk be held over from one day to the next so that operations can begin at an early hour, but there is no excuse for mixing the receipts of one day with those of the next. Such a practice will perpetuate the growth of any organisms over a whole week's run, and you may find yourself in serious trouble with thermoduric bacteria, ropy milk, and other organisms, bringing about reductions in milk quality.

It would seem from this distance, that it would be possible for you to procure another small holding tank so that the previous day's receipts could be completely utilized, and the holding tank washed and sterilized before any of the current milk is placed therein. This procedure would be an added safety factor in your plant and might save you a whole day's receipts. I am surprised that you have been able to manage for any period of time without complaints from consumers or local health officials.

We feel as you do, that the practice is not a healthy one and that if you do not wish to invite trouble in your plant, you will make some arrangement whereby your equipment is completely sterilized each day so that there is no possibility that organisms will be multiplying continuously in your hold-over milk.

•

Propose Oleo Ban

Representatives of three leading dairy organizations urged imposition of a flat ban on the imitation of butter through the commercial manufacture or sale of oleomargarine colored yellow in semblance of butter. Such a ban, they said, would enable Congress and the state legislatures to remove all taxes and license fees now imposed on the butter substitute to protect consumers against fraudulent sales.

The proposal was advanced in a statement by policy committees representing the National Cooperative Milk Producers Federation, the American Butter Institute, and the National Creameries Association.

The joint statement emphasizes that the new policy is made possible by recent Supreme Court decisions, which strengthen the power of the Fedeal Government to cover those intrastate activities, which may affect interstate commerce. It further points out that the "commercial yellow" ban would permit housewives to obtain all the oleomargarine they want for home use in its most economical uncolored form, without payment of any taxes whatsoever.

The new proposal would also abolish all fees and reporting requirements for retailers wholesalers and manufacturers, and permit hospitals and other institutions to serve uncolored oleo without license or tax. At the same time, the statement affirmed, the ban would effectively curb fraudulent and deceptive efforts to deprive the nation's dairy industry of its vital butter market.

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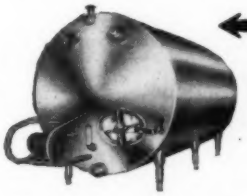
STAINLESS STEEL, polished to a gleaming finish, lines all Sani-Certified Dairy Equipment. Corrosion-proof surfaces afford no foothold for bacteria. Flavor, odor and color of your products are safe. And Sani-Certified Equipment is built to last.



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Made to your specified capacity for vertical or horizontal installation. Cold wall or non-refrigerated types available. Interior polished to one smooth surface, easy to clean and to keep clean.

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Built with one or two compartments for either platform or suspension mounting. Easy operating valve permits high speed milk handling. All corners rounded, seams fully ground and polished to facilitate cleaning.

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1000 Berry Ave. St. Paul 4, Minn.

ANIMATED DISPLAY STUNTS

By **SHERMAN RAY**

ANIMATED DISPLAYS can help focus more attention on window displays because a moving object always attracts the eye. Therefore the use of animation in windows can pay handsome dividends—if care is taken in the choice of animation.

Psychologists who have checked animated window display pulling power report that 70% more people will stop to look at a display where there is animation, in contrast to those who stop to view a still display.

Herewith are a number of animated display ideas, some of which may appeal to you, and some which perhaps will be the springboard for your own creations. Your local electrician or display firm can help you with the mechanical end of the job.

DUTCH WINDMILL: This type of window display animation will fit into almost any window. The blades of a miniature windmill can be lettered with simple signs advertising your products or services, and a sliding panel at the centre of the mill can flop up placards, advertising any specials you may wish to feature. A small electric motor, of course, works this sort of arrangement, and it also makes the blades revolve—slowly if you wish. Remember, you need not jam all your window display with merchandise. Space devoted to an animated display like this will sell more goods for you because it will attract more people. Flank such a display with any items you wish to sell.

ANIMALS: Perhaps one of the most common and effective types of animated display is that which employs a toy animal of some sort. In this kind of display a grotesque black cat may stand in your window in bristling manner, bobbing her head up and down, her tail straight up and her eyes gleaming. Or the bobbing animal may be a tiny bear, or a dog, etc. Any child who sees this display will grab her mother's hand and yell, "Oh, Mommy look!" and she'll drag her mother to the window; then you will be on the way toward making a sale you might otherwise have missed.

OUTDOOR SCENE: This type of display can have considerable animation. For example, you can devote one corner of a window to an outdoor scene which first of all gives people the urge to get outdoors. Animation can be had in the form of a tiny waterfall, as well as a campfire which glows. (Cover an electric bulb with a dome of red cloth—the dome of course, being on the floor level of your display.) Or you can have a few toy cars going up a hilly road and disappearing into a tunnel. Such a display will create a fine outdoor atmosphere. Place your specials near such a display.

TURNTABLE: Perhaps one of the most inexpensive animated displays you can use is to have an average-size turntable in your window and place merchandise specials on it, which will revolve with the table and thus will attract attention. These turntable items can also bear selling copy on placards, if you wish. Simple turntables operate off a single motor; the more complicated ones require two or more motors. Any display expert can help you solve this problem, keyed to your requirements.

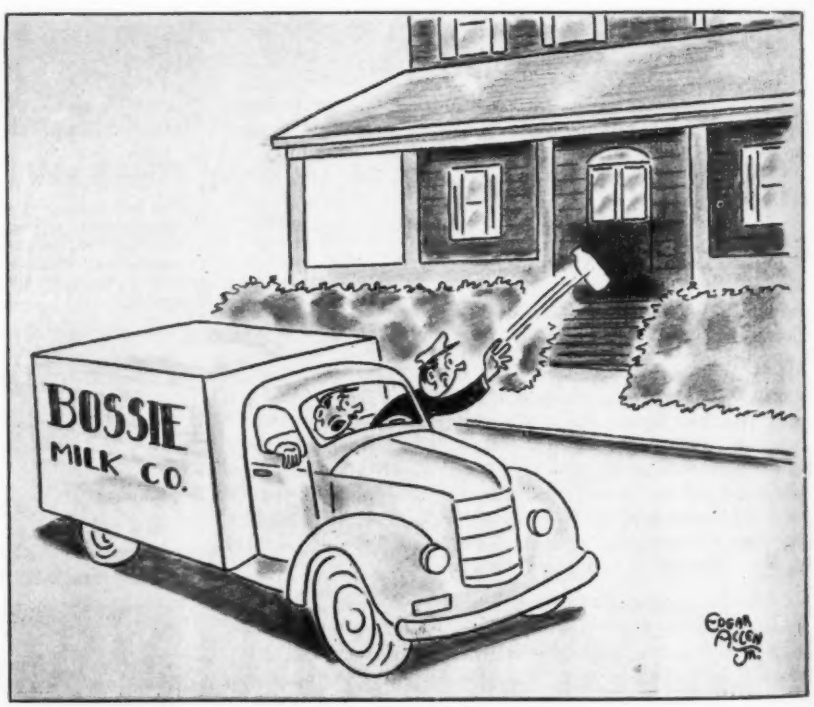
WINTER SCENE: Seasonal scenes go very well, and the merchant who has a couple of large windows can partition off part of one and make a nice winter scene. You can buy a couple of bags of artificial snowflakes and use a fan to stir them up. This gives animation and people will also see what you have on display.

MINIATURES: People are always fascinated by miniature displays such as marionettes or clowns, and it's a good idea to use this kind of display occasionally. It will attract the kiddies and that will make the mothers and fathers look in your windows, too. Then your products on display and your placards with selling copy will do the rest.

MOVIES: Quite a few businessmen in various sections of the country are darkening their display windows at night, and then use a small movie camera to show interesting reels against a screen in their window. The merchants do not for-

Dairy Daze

By Edgar Allen, Jr.



"YOU'RE NOT A NEWSPAPER ROUTE BOY ANY MORE, FOODLE—
WE DELIVER MILK A BIT DIFFERENTLY!"

get to insert a few slides which tell of the various things they have to sell. This is a stunt which gives animation, and it can always be counted on to draw the attention of many people.

TOY TRAIN: Merchants can also use toy trains very effectively to give a window display some animation. Perhaps you sell them or perhaps you bought your boy a toy electric train; he tired of it and you put it in the attic. Bring it down and put it in your display window occasionally. Use of it need not be confined to the holiday season. You can put placards on each coach, if you wish, advertising your products, or you can even decorate each coach to represent some product you sell.

FIREPLACE SCENE: Sometimes it pays to create a home scene, if you have large windows. You can arrange for a fireplace display to represent cosy home comfort. This can be animated by boxing an electric fan in asbestos and tacking red and orange georgette crepe "flames" into a real log. The fireplace will look real when you set the fan going with the "flames" leaping about. Such an arrangement will appeal to many people.

ROBOT: This form of animation can consist of a comical robot who winks at you knowingly and pulls advertising placards out of a box which advertise your firm and its products. This type of animation appears to work wherever it is tried.

BIG BOOK: Another type of animated display which is of interest to many people can consist of a large book, the pages of which are lettered with copy about your store and products. The leaves slowly flop over, one by one. This is an effective display at night, especially when you have plenty of light centered on the book.

MAGNET: Almost any good displayman can work out a magnet device for you, where a clown walks across a stage, falls down, then gets up, depending upon the arrangement. This sort of animated display has humor and attracts many people of various ages.

COLORS: Another good idea along animated lines is to set your lighting arrangement so that, at stated intervals of short duration, a disc changes the color of light on your window display. These constantly changing colors help greatly to attract attention to your windows.

Merchandising experts have estimated that good display windows represent almost one third of the store rental of an average retail business. Therefore, it can be seen that it is highly important to make use of a window, and this can be done through occasional animation. Many people buy on impulse, and an animated display attracts their attention and frequently gives folks that impulse to buy. So we suggest you consider animation in your window display program if you want to make more sales and profits.

•

S. & S. Mail Ads Best

Advertising by Stainless & Steel Products Co., St. Paul, makers of dairy equipment, was chosen "Best of Industry" among manufacturers of industrial equipment. The award was made by the Direct Mail Advertising Association at the association's annual conference in Philadelphia September 29, F. W. Casey, Stainless & Steel president, announced.

The campaign which topped the industrial equipment group consisted of all types of printed promotional material and was used in 1947-48. The preparation of this material was handled for Stainless & Steel by Chester A. Gile, Advertising, of Minneapolis. Awards were based on results and effectiveness, plan and continuity, copy, and design and physical appearance.

Compo-Cooler

Saves You TIME LABOR and MONEY

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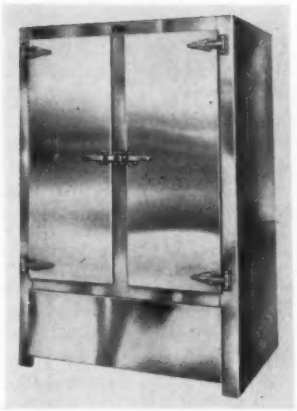

✓ CHECK THESE POINTS
they are important to you!

1. Your composite samples will not lose water by evaporation and show a higher butter fat content than they should. The fan coil prevents the moisture in the air from freezing on the coils. Even if stoppers in bottles are loose, no water is stolen.

2 You no longer need keep samples in a rack exposed to the air for several hours and then wheel them to a distant cooler, for with Compo-Cooler each tray is exposed only while being used at the weighing tank and then it goes back into the cooler, right on the spot — quickly.

3. With Compo-Cooler you don't have trays piled one on the other so you have to rehandle to get the one you want. Compo-Cooler trays are labelled and each has its place . . . they are taken out and put back, quickly and easily . . . no matter how fast the cans are coming off the receiving conveyor.

4. Compo-Cooler saves you time, labor and money — no messy brine and no ice to lug several times every day.

COMPO-COOLER "Cabinette"

— is a *self-contained* unit, available in two desirable sizes for the small plant. Comes ready to set wherever you wish. Plugs into any socket and is ready for immediate operation. No installation costs.

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— is the practical unit for the larger plants, serving from 360 to a thousand dairies, or more. Comes in any size to meet your specific requirements.

BOTH the "Cabinet" and "Cabinette" are made of LIFETIME Stainless Steel, inside and out. Both eliminate makeshift and inefficient methods of handling composite samples. Both meet all specifications and recommendations of the U. S. Dept. of Agriculture and all state agencies.

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Cream Defects - THEIR CAUSES *and* PREVENTIONS

By LYNN R. GLAZIER

This article by Mr. Glazier serves to underline the wide variety of monkey wrenches that can get into the cream manufacturing works. Listing ten different defects with a total sixty-six possible causes, the author lists thirty-nine preventative measures.

No stranger to the dairy business, Lynn R. Glazier is associated with the Pfaudler Company in Rochester, New York. He is a graduate of the University of Massachusetts where he majored in dairy manufacturing. Mr. Glazier is a native of Leverett, Massachusetts and it is rumored that in the spring when the sap begins to run he has a hard job keeping his mind on subjects even as important as those that relate to the dairy industry.

●

ALTHOUGH THE quality of cream finding its way into butter production and being delivered bottled to our homes has steadily improved during the past few years, most dairies still experience some cream complaints from time to time. One may be fortunate enough not to be troubled with off-flavors and still have complaints from his fresh cream customers because of undesirable viscosity or "body" defects.

The value of high butterfat creams is so high today, that it is essential to avoid producing a product which is unpleasant to consume. In some areas it is very difficult to avoid certain strong feed flavors at times during the year because of the prevalence of persistent weeds or bushes that impart their characteristic flavor to the milk. However if the undesirable weeds are few in number they may be quite readily pulled out or destroyed.

The major cream defects, as well as their causes and the means of preventing or overcoming them are numerous. To enable the dairymen to find the source of their trouble more readily this information is assembled in table form for convenience. It is hoped that it will be of considerable help to you who are endeavoring to produce a good quality cream.

Some of you who read this article are quite familiar with cream production and the terminology, while others with less experience may find some of the terms new, so a little space will be taken here to discuss some of the major defects briefly.

Cream Plug

This is the formation of a "plug" or a heavy thick layer at the top of the bottles which makes it difficult to pour the cream. The direct cause of it is the collection of large fat particles at the top of the bottle because of one or more of the reasons listed in the table.

Four Millionth Holstein

October 1, 1948 saw the registration of the 4 millionth Holstein-Friesian animal in the offices of The Holstein-Friesian Association of America.

While her number, 2,959,503, doesn't suggest a milestone, the number combined with the corresponding bull figure rounds out to 4,000,000 even.

Owned and bred by George R. Zimmerman, Kempton, Pa., the animal is Colantha Pietertje Canary, born November 3, 1947.

She was sired artificially by Lauxmont L Pietertje Design, 927829. Her dam is Colantha Posch Canary Fobes.

From an imported total of less than 8,800 animals, the national Holstein herd has multiplied to 4,000,000, a tremendous increase since the founding of the organization in 1885.

Feathering or Curdling

As indicated, the defect is a slight curdling of the cream when added to hot coffee. It seems to be a precipitation of some of the skim milk solids found in milk and cream. Hard water containing an excess of calcium salts may be the cause rather than the cream itself.

Lipase Activation

Lipase is an enzyme or a group of enzymes, known as the lipolytic enzymes, which have the power to hydrolyze or break up the butterfat and yield free fatty acids and glycerin. This causes the milk, cream or butter to develop a rancid flavor and odor. Lipase is present in the milk when it is drawn from the animals, some milk containing more than others. Cows which have been milked for a considerable period of time since calving produce milk that is most likely to develop lipolytic rancidity.

Off-Flavors

Five groups of undesirable flavors are usually considered in a discussion of off-flavors in dairy products. These include:

1. *Feed flavors* imparted to the milk while it is being manufactured by the cow.
2. Flavors *absorbed* by the milk from materials around the barn, milk house, containers or processing plant.
3. Those caused by variations in the chemical composition of the fresh milk.
4. Those caused by chemical changes (decomposition) of one or more of the milk constituents.
5. Bacterial causes.

Oiling Off

As the term implies, this is the formation of "oil" or melted butterfat on the surface of the product. It is the running together of numerous fat globules to form oil-like masses, causes of which are itemized in the accompanying table.

Poor Whipping Ability

Cream that whips up readily and to a high overrun is desired by the housewife as well as the fountain and cafe proprietors. Although frequently the customer is at fault rather than the cream when the desired results cannot be obtained you, as a dealer, should know the proper explanation to correct the condition.

Poor Viscosity

Consumers particularly may judge the quality of cream soley by its thickness or viscosity and your customers may assume that a thin cream is a low fat cream, when in reality it may be of fairly high fat percentage, but lacking in viscosity or body.

Serum Separation

This is the separating of the non-fat portion (skim milk) from the fatty portion of the cream. It is an undesirable characteristic for the customer assumes the cream is thin and that skim milk has been added to it.

There may be a few minor causes that are not included in the table below, but experience has shown that if all those listed are eliminated that one will have very little trouble with complaints.

Defects	Causes	Prevention
1. Cream Plug	1. High acidity of milk or cream. 2. Separating at too high temperature. 3. Holding cream warm after separating. 4. Freezing of milk or cream. 5. Mixing old and fresh cream. 6. Repasteurizing. 7. Excessive agitation in partly filled vats and cans. 8. High heat exchange without sufficient agitation. 9. Slow heating. 10. Excessive heating. 11. Any formation of foam. 12. High speed pumps.	1. Avoid practices listed as causes. 2. Separate under 90°F. 3. Avoid holding cream for any period of time at incubation temperature.
2. Feathering	1. High acidity. 2. Neutralizing with lime. 3. Abnormal mineral content, of the cream. 4. Hard water used in coffee (excess calcium salts). 5. Low temperature pasteurizing and homogenizing. 6. Excessive pressure—one stage	1. Avoid causes listed. 2. Boil water used in coffee prior to making coffee. 3. Add cream to coffee rather than vice versa. 4. Pasteurize at 150° or better and homogenize at same temperature.
3. Foaming	1. Excessive agitation especially when cold. 2. High speed pumps. 3. Excessive hand stirring. 4. Partially filled vats.	1. Use air-tight separator. 2. Avoid the causes as listed.
4. High Acidity	1. High initial acidity of milk. 2. Standing at room temperatures. 3. Storing at too high temperatures.	1. Avoid use of high acid milk. 2. Pasteurize soon after separation or cool after separation.
5. Lipase (enzyme) Activation	1. Excessive amount of enzyme in milk from certain cows late in lactation. 2. Vitamin A deficiency. 3. Catalyzing effect of metals. 4. Homogenizing raw milk or cream. 5. Agitation plus oxygen activates the enzyme.	1. Trace to farm and eliminate cow responsible. 2. Avoid the listed causes. 3. Pasteurize prior to homogenizing and homogenize at pasteurizing temperature.
6. Off Flavors	1. Raw milk as received may have feedy, barny, metallic, high acid or other off flavors. 2. Lipase reaction in processing caused by agitation plus oxygen. 3. "Cooked" flavor from too high heat exchange, pasteurizing too high or too long with insufficient agitation. 4. Freezing milk or cream gives an oxidized (cappy) flavor. 5. High acidity of milk or cream. 6. Slow turnover and using returned product too long.	1. Check flavor of raw milk received. 2. Keep turnover as rapid as possible and eliminate returns as much as you can. 3. Avoid exposed copper, sunlight and excessive aeration, or agitation. 4. Don't accept frozen cream and milk. 5. Avoid neutralizing as much as feasible. 6. Check on temperature of received milk and (or) cream.
7. Oiling Off	1. Frozen and churned milk in transit. 2. High speed pumps. Pumps sucking air. 3. Foam formation during process. 4. Pasteurizing partial batches. 5. Separating high fat percentage (avoid greater than 45%). 6. Separating at too high a temperature. 7. Holding too long a period at pasteurizing temperature or with too high heat exchange. 8. High acidity plus high temperature.	1. Avoid excessive agitation, foaming throughout. 2. Separate under 100°F. 3. Avoid other listed causes. 4. Don't allow cream to freeze on surface cooler. 5. Avoid long agitation of warm cream before pasteurizing. 6. Avoid slow vat cooling. 7. Homogenize at 300-500 lbs.
8. Poor Whipping Ability	1. Excessive agitation. 2. Too high separating temperature. 3. Too low a fat content. 4. Freezing of the cream. 5. Insufficient aging time after pasteurization. 6. Too high a whipping temperature. 7. Adding sugar too early in the whipping process.	1. Age 24 hours. More is unnecessary. 2. Fat content of 33-35%. 3. Don't homogenize. 4. Chill whipping container and mechanism.
9. Poor Viscosity	1. Churning, freezing of raw milk. 2. High speed pumps and excessive agitation. 3. Separating at too high a temperature. 4. Separating pasteurized milk. 5. Air incorporation and foaming. 6. Repasteurizing. 7. Pasteurizing temperature too high. 8. Cooling too fast, or too low suddenly. 9. Freezing cream. 10. Too high homogenizing temperature. 11. Storing cream too high. 12. Insufficient aging (under 12 hours).	1. Separate raw milk under 90°F and pasteurize the cream. 2. Pump as little as possible. 3. If necessary to pump, pump to cooler rather than from cooler to the filler. 4. Cool to 50°F, then slowly in refrigerator **without** agitation to below 40°F. 5. Homogenize. 6. Separate desired fat percentage rather than standardize.
10. Serum Separation	1. Agitation at warm temperatures. 2. Separating high fat percentage and standardizing with skim milk. 3. Storing for long periods or at too high a temperature. 4. Low pasteurizing temperatures. 5. Too much pumping.	1. Add small amount of stabilizer, if lawful. 2. Separate at low temperature to desired fat percentage.

MAINTENANCE TALK . . .

Maintenance Talk *is another new feature which the "American Milk Review" will present each month. This month's page is the result of contributions by Mr. W. F. Schaphorst of Newark, N. J. It is our hope that other men, familiar with maintenance problems, will contribute to the new feature. We extend to all of our readers a cordial invitation to participate.*

●

Modernizing Power Plants

Modern milk products power plants are so much more economical and efficient than those of ten to twenty years ago that owners of old plants are showing concern over the state of affairs. They are wondering what can be done, if anything. Will it be necessary to start all over again and build a new power plant, or can the present plant be rehabilitated? Can it be made capable of competing with modern plants? These are important questions.

In most instances the old plant, particularly the boiler plant, can be modernized without great cost. In some instances it can be made better than certain so-called modern plants. And, what is of prime importance, the cost of the modernization will be considerably less than would be the cost of a new plant.

Any thinking person will realize that heat will pass through an old boiler plate and an old tube as readily as it will pass through a new plate, provided the plate is kept clean. As a matter of fact there should be a slight improvement with age because boiler plates and tubes usually become slightly thinner. The boiler whose heating surface does not change with age is a rarity. Therefore, arrange to keep the tubes perfectly clean inside and out. The modern method is to keep boiler water so pure that no scale will be deposited. Install cleaning devices. By installing a soot cleaner all ash and soot can be kept off the surface of the tubes.

Put the boiler itself in A1 condition and then get after and improve combustion. It is as important to have complete and proper combustion as it is to have perfectly clean heating surfaces.

Almost invariably combustion efficiency can be improved by increasing furnace volume. This is accomplished by installed modern boiler baffle walls and sometimes modern furnace lining. There must be no air leakage through boiler baffle walls. And there must be no heat leakage through the outside boiler walls. Proper baffle wall design will give the correct gas velocity through the passes of the boiler. There will be no slagging. Be sure to avoid cracking or breaking. Don't install cheap equipment.

A steam superheater, perhaps, should be installed. Perhaps a feed water heater. Perhaps an automatic feed water regulator. Or a modern damper regulator, steam purifier, steam traps, automatic combustion control system, pump governor, steam flow meter, etc. All of these devices are of great importance in the modernization of milk products power plants. It is possible to do almost anything to an old boiler plant with the exception of making the old boiler stronger. Such a thing can be done, of course, but it is not economically practical.

●

Valves Must Be Made of "Good Stuff"

The rate of advance in industry has been so rapid during recent years that it is difficult to keep up with events. Not long ago steel was our strongest metal and we considered it the "last word" because it possessed a strength of 50,000 lb. per sq. in.

But today we have metals more than twice as strong as steel, and as a result, in the manufacture of valves where steam, gas, and other temperatures are high, and where pressures are also high, it is becoming the custom to specify the more modern metals, particularly for valve seats, discs, stems, and miscellaneous parts.

Where the temperature is as high as 750° F. and the pressure 250 lb. per sq. in. or higher, monel metal is decidedly superior to steel in resisting the erosion and wire-cutting of superheated steam. Chromium molybdenum steel and stainless steel also resist corrosion remarkably well. They are not affected by salt water, acid water, etc. In fact the long list of acids that do not affect these three mentioned alloys is amazing.

Although the higher cost of these metal parts makes the first cost of the valves higher than without them, their use usually proves to be well worth while in the minimization of shutdowns and replacements.

Monel metal contains about 65% nickel, 25% copper, 2.5% iron, 2% manganese, and trifling amounts of aluminum, carbon, silicon, and sulphur. It has a tensile strength of 80,000 lb. per sq. in., and in instances goes up to 150,000 lb. per sq. in., depending on the temperature. It is said that even at temperatures as high as 1,000° F. its strength is 50,000 lb. per sq. in.

Chromium molybdenum steel involves the use of 4% to 6.5% of chromium and 0.45% to 0.65% of molybdenum with about 0.60% manganese, 0.40% silicon, 0.20% carbon and traces of phosphorus and sulphur. It has a minimum tensile strength of 100,000 pounds per sq. inch.

Stainless steel is made to many specifications. Thus for example one specification calls for about 12% chromium, 0.50% manganese, 0.60% molybdenum, 0.50% sulphur, 0.50% silicon and traces of phosphorous and selenium. This specification gives a tensile strength of 85,000 lb. per sq. in. minimum. Stainless steel possesses many excellent properties and is making rapid strides in many directions. It is well worth considering where greater valve durability is important. The writer has in mind an excellent reducing valve, for example, for pressures up to 6,000 lb. per sq. in. All of the internal metal parts in that valve are entirely of stainless steel.

The cost of a monel metal or stainless steel valve varies from 65% more to 100% more, depending on the size of the valve. The larger the valve, usually, the greater the difference in cost due to the greater amount of higher priced metal used.

●

Centrifugal Pump Was Noisy

Recently a noisy centrifugal pump which operated with a suction lift was called to our attention. The engineer asked whether it would be all right to admit air into the suction.

Air admitted into a suction line sometimes does eliminate noise, but it is a procedure that cannot be recommended. The noise is sometimes due to the fact that the suction lift is excessive causing what is known as "cavitation" in the impeller. Air in the suction is generally *bad* because it reduces pump efficiency and it is also likely to promote corro-

WANT ADS
PAY

sion. In other words admission of air into the suction is a makeshift method. The preferable way is to determine the cause of the noise and then eliminate the cause. If the noise is due to excessive suction lift the pump can probably be lowered sufficiently so that the lift will be of correct height. Do the bearings rattle? If so, repair the bearings. There always is a BEST way to handle a repair job.

●

Centrifugal Pumps

A correspondent writes that every time they start a centrifugal pump in their plant they are obliged to prime the pump. He states that the pump does not operate as well as it once did and he would like to know what is the matter with it.

Pump priming is not at all uncommon with centrifugal pumps. Even where foot valves are installed in the suction pipe for the purpose of holding the water in the pipe when the pump ceases to operate, air may get in and permit the water to drop. Sometimes foreign objects —pebbles, dirt, sticks, etc.—manage to get caught in foot valves, holding them open, and when that happens the purpose of the foot valve is defeated.

If air leaks into the suction line, as already stated, it is quite possible that all of the water will be drained out and the pipe will be filled with air instead of water. Air in leakage is further a "bad water. Air inleakage is further a "bad thing" in that it reduces the capacity of a pump, which may be one of the reasons why the above pump is not operating as well as it once did even after it is primed and operating. In some instances the air carrying ability of water is utilized where the pressure of the system is maintained pneumatically. Air is then purposely admitted into the suction, in small amounts, and continued until the pressure tank contains sufficient air.

Again, if the water being pumped is "too hot", similar trouble will be experienced. When it is too hot, steam will be generated in the suction pipe due to the reduced pressure. Thus for example if the temperature of the water being pumped is 212° F. it cannot be pumped "by suction" at all. It will be necessary to submerge the pump in water of that temperature in order to pump it. If the temperature of the water is, say, 183°F., the maximum lift is 15.4 ft. If the temperature is 170° F. the maximum lift is 20 ft. And so on.

An interesting and valuable kink in connection with centrifugal pumps is this: in some instances it is possible to increase the capacity of a centrifugal pump by changing impellers. Let us say, for instance, that you buy a pump for handling a given quantity of water against a given head at best efficiency. An impeller in that same pump which will handle more water will give a lower efficiency, so, the thing to do is to use the "smaller" impeller. Then, when the time comes to pump the greater quantity of water the "larger" impeller is installed and it, in turn, handles that quantity of water at best efficiency.

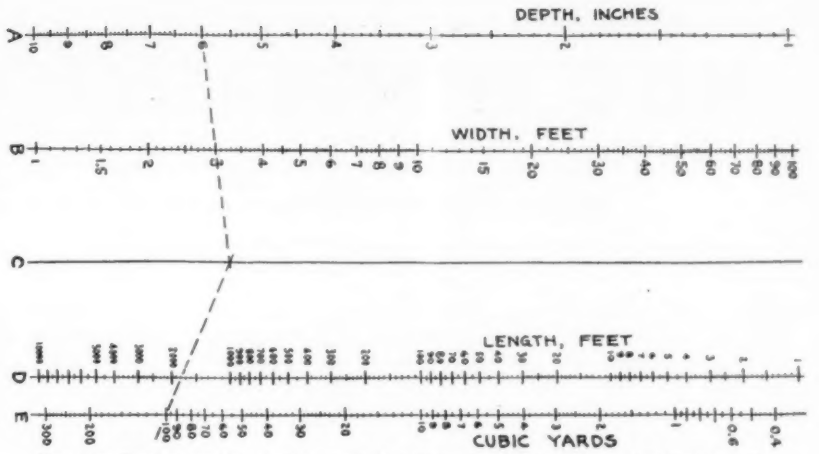

Chart for figuring number of cubic yards in a long narrow excavation when depth is given in inches and width and length in feet.

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Pipe and Conduit Trenches

MILK PLANT operators are frequently involved in the building of trenches for conduits, pipe, ducts, and so on. There are plenty of tables available for computing large excavations, but very often it is desirable to know the number of cubic yards in long, narrow, shallow excavations, in which the depth is given in inches and the width and length in feet.

The chart herewith has been developed purposely to take care of excavations of that character. The depth, column A, is given in inches, while the width, column B, and length, column D, are given in feet.

Simply run two zig zag lines across the chart as indicated by the dotted lines and the number of cubic yards is instantly given in column E.

For example, the dotted lines drawn across the chart show that if we have an excavation 6 inches deep, (column A) by 3 ft. wide (column B) and 1800 ft. long, (column D) the number of cu. yards will be found to be exactly 100, in column E.

Merely run a straight line through the 6, column A, and the 3 in column B and locate the intersection in column C. Then from that point of intersection run through the 1800 in column D with another straight line and the intersection with column E gives the answer as 100 cubic yards.

But that isn't all. The chart will also take care of deep excavations where desired. Thus if the depth is 60 inches instead of 6 inches the same dotted lines will give the answer as 1000 cubic yards instead of 100. That is, if a digit is added in column A a digit must also be added in column E. Likewise if a digit is added in column B a digit must be added in column E.

Thus the same dotted lines would show that for an excavation 6 inches deep by 300 feet wide, and the length 1800 feet, you would have to add two ciphers to column E because two ciphers were added to column B thereby giving us 10,000 cubic yards in column E as the correct answer. Likewise if the depth should be 600 inches, width 300 ft., and length 1800 feet, we would add four ciphers to the 100 thereby making it 1,000,000 cubic yards.

It is therefore evident that this chart will easily take care of almost any rectangular excavation encountered by milk plant operators and it will give results that are surprisingly accurate.

●

How to Fill a Sack

Remove the bottom from an ordinary pail. Insert the bag in the mouth of the sack and hold the edges of the sack against the top of the pail. The bottomless pail gives a funnel effect and prevents the sack from sagging and twisting while affording ample room for the flow of material into the sack.

NDC MEMBERSHIP CAMPAIGN

National Dairy Council Lists Thirteen Major Activities of Direct Benefit to Members — Education and Promotion on Nationwide Scale

THE MOST PRACTICAL and common-sense approach to get consumers to beat a path to *your* door is to invest money for education and promotion in a nationwide organization that knows, through 33 years of experience, how to reach key leaders that count in establishing America's food habits.

Well-informed dairy industry leaders, familiar with the work and value of the National Dairy Council, claim repeatedly that no agency, regardless of what industry it represents, sells more of its industry's products per dollar of revenue than the National Dairy Council sells for the dairy industry. A membership in NDC is not a cost—it is an investment that returns dividends.

Many in the dairy industry are reaping dividends from their membership investment. However, there are still others who should take advantage of NDC's sales promotion program, that has proved its value in building a foundation for point-of-sale purchases for more than thirty-three years. Membership dividends are realized from the following major activities:

1. *Publicity* in leading newspapers, national magazines, and over the radio, reaches millions of homes to stimulate greater use of milk, butter, cheese and ice cream. It is a service worth hundreds of thousands of dollars to the dairy industry each year.

2. *Movie showings* in every state focus the eyes and ears of millions of consumers on the need for more butter, more cheese, more ice cream, and more milk in the daily diet. These movies are constantly in circulation through national booking agencies.

3. *Professional advertising* is scheduled in official publications of important group leaders, such as doctors, dentists, dietitians, public health workers, home economists and teachers. These advertisements stress the importance of all dairy foods in the daily diet.

4. *Informative literature*, such as booklets, folders and pamphlets, is expertly created and produced and distributed to opinion-influencing leaders who spread the need for greater consumption of butter, cheese, ice cream and milk. Each year more than 11 million pieces get into the hands of these influential leaders across the country.

5. *Leader contacts*, made by NDC staff members, contribute immeasurably to the favorable attitude of important people toward the dairy industry and dairy products. This results in priceless product promotion on state and national levels. No other food industry enjoys a greater acceptance or endorsement of its products.

6. *Convention exhibits* are created and built by the National Dairy Council and are designed to dramatize the food value of butter, cheese, ice cream and milk to thousands of leaders who mold the food habits of the nation.

7. *Professional leaders* are constantly kept informed on the reasons why dairy foods are essential in the daily diet. They willingly convey their valuable opinions to thousands of other leaders in every state of the nation.

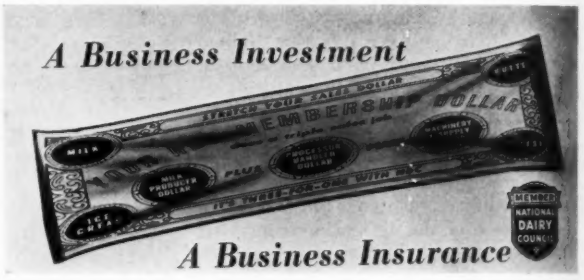
8. *Consumer leaders* are reached and educated on the importance of dairy foods, As members of parent-teacher associations and women's clubs, they in turn, reach millions of housewives and influence them to use more dairy products in family meals.

9. *Research projects* are placed and supervised at nationally recognized colleges and universities by the National Dairy Council. They serve as a means of stabilizing food habits for consumers.

10. *Promotion* by NDC keeps the value of dairy foods uppermost in the minds of consumers. NDC fights for at least a fourth of the food dollar regardless of consumer income. Holding and expanding sales markets is an NDC function.

11. *Consumer booklets* and leaflets, colorful in design, are prepared to help members sell more butter, milk, cheese, and ice cream.

12. *Timely tested recipes*, in handy leaflet form, for distribution to consumers, are available at NDC for promoting the increased use of dairy products. Display materials, consisting of vehicle cards, window cards, posters for fountains and restaurants, are also available.



13. *Research facts* are compiled from extensive studies at leading universities and colleges and are mailed to NDC members for their information and use.

Investment in this program gives your dollar a chance to work for you locally.

And here's how:

The National Dairy Council works through opinion-forming men and women who mold the eating habits of consumers everywhere.

The NDC Membership Campaign is now in full swing to raise $225,000 to carry on effectively the program to promote health and human welfare. One-third of the budget comes from the milk producers through A.D.A., one-third from processors and handlers, and one-third from the manufacturers of machinery and supplies. Each segment gets a three-dollar return for each dollar invested because all share equally in the results.

THE CORRESPONDENTS REPORT

(Continued from Page 48)

for each additional quart; 19 cents a half-pint for 20-percent cream, and 23 cents a half-pint for 30-percent cream. Wholesale prices were also proportionately pegged down so that chain stores could make the same retail price reductions.

The one-cent milk reduction went into effect in Saint Paul at the same time it was adopted in Minneapolis. Saint Paul consumers now pay 18 cents a quart for milk, one cent less for both coffee and whipping cream per half pint.

The price dip to consumers was influenced by conditions prevalent in many parts of the country. Early-summer droughts in the Northwest failed to have the damaging effect on grain that was feared, and good rains later in the season restored crops and boosted yields into bumper proportions.

Another factor of paramount importance was substantial reductions in the price of milk feeds commonly used in dairying. The Northwest, like other parts of the country, has felt the curtailment of dairy exports Overseas, has taken the reaction in the form of lowered prices on the wholesale market.

The comparatively high prices of butter in the first six months of the year had an appreciable effect on the consumption of butter in the Northwest, and this curtailment of purchases by the housewife resulted in large storage of butter stocks.

There is now an adequate supply of milk in the Twin Cities and throughout the Northwest and all indications point to the belief that this statement will hold throughout the winter months.

John Brandt, president of the Land O'Lakes Creameries, Inc., Minneapolis, in a recent speech before the annual meeting of the National Co-Operative Milk Producers Association, in Portland, Ore., told dairymen that the oleomargarine issue will again be hotly contested in congress. Mr. Brandt made the statement, "I believe that the best interests for the dairy industry is to advocate full repeal of all taxes to give oleomargarine the clear right of way to stand on its own feet without being hampered in any way in its manufacturing and merchandising opportunities. However, in doing so we should tie to tax repeal legislation provisions that will absolutely and without reservation prohibit the use of the color yellow in any shade in the manufacture of oleomargarine and the serving of the product colored yellow in public eating places." He further declared that the oleomargarine manufacturers should join in pressing for such legislation in the consuming public's interest and to prevent fraudulent sales of oleomargarine.

BRAND NAMES APPOINTMENT

New York—The appointment of Nathan Keats, former Manager of News Services, to the newly-created position of Assistant to the President, has been announced by Henry E. Abt, President of Brand Names Foundation, Incorporated.

In his new post, Mr. Keats will coordinate administrative and field activities of the Foundation while continuing to guide BNF's community "Parade of Progress" program with which he has been associated since the pioneer "Greenfield Experiment" in October of 1947.

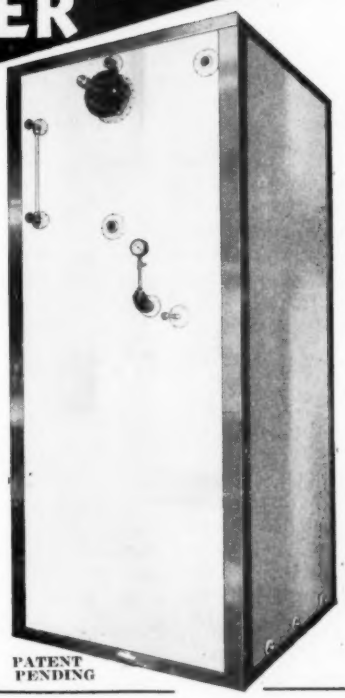
Prior to joining Brand Names Foundation in August, 1947, Mr. Keats was a member of the public relations and advertising staff of The International Nickel Company, Inc., for three years, serving that organization in both editorial and copy executive capacities. He has also been associated with Western Electric Company in an editorial capacity, the Newark Star-Ledger, the Wisconsin State Journal and for two years, headed his own organization, Book Shops Incorporated.

Mr. Keats is a graduate of the University of Wisconsin and has done graduate work at the University of Wisconsin and at Harvard Law School.

"King Zeero" FURNISHES DEPENDABLE EFFICIENT COOLING AT LESS COST

THE ICE BUILDER
a money saver

Low Initial Expense
Low Upkeep



Great Cooling Efficiency
Smaller Compression Unit
Reserves for Peak Loads
Low Maintenance Expense
Covers Less Floor Space
Sanitary in Appearance

Never obsolete.
Just add a unit
as need justifies.

PATENT PENDING

There are several musts in deciding the value of equipment. *First*, flexibility in use. - Light or heavy loads do not detract from King Zeero's top efficiency. *Second*, operating expense - King Zeero's small compressor saves electrical demand charge and maintenance expense. - No moving parts except refrigerant float valve. *Third*, replacement - normal depreciation is fifteen to twenty years - when production increases beyond capacity, add another unit. *Fourth*, floor space is minimum and the polished aluminum exterior blends well with all other equipment.

Write for details of this low-priced unit and location of near-by installations.

THE KING ZEERO COMPANY
1447-55 MONTROSE AVE.
CHICAGO 13, ILL.

BORDEN'S WINS "OSCAR"

For the fifth year in a row, the Financial World Annual Report Survey had cited Borden's for having the best annual report of the dairy products industry. Theodore G. Montague, president of The Borden Company, accepted the bronze "Oscar" for the 1947 report at the Annual Awards Banquet held in New York recently.

The Borden Company is one of eleven firms to have won five such awards in succession. More than 4,000 corporations submitted 1947 annual reports in the national survey. These were judged in 100 industrial classifications for "Best of Industry" awards.

Theodore G. Montague (left), president of The Borden Company, receives the "Best of Industry" annual report trophy from Weston Smith, Financial World vce-president.

The jury selecting "Oscar of Industry" winners was headed by Dr. Lewis Haney, professor of economics at New York University. He was assisted by Dr. Glenn Griswold, publisher of Public Relations News; Sylvia F. Porter, financial editor of the New York Post; Elmer Walzer, United Press financial editor; and Lester Tichy, industrial designer, who served as art director.

More than 1,000 business leaders from all over the United States attended the banquet.

●

RAPIDS-STANDARD PROMOTES

Appointment of Russell Inwood as vice president in charge of manufacturing and engineering, is announced by James R. Sebastian, president and general manager of The Rapids-Standard Company, Inc., Grand Rapids, Michigan.

The new advancement climaxes eight years of Rapids-Standard experience for Inwood who was a supervisor of assembly, welding and shipping operations until he became superintendent of the Bond Avenue Grand Rapids plant five years ago.

In his new capacity Inwood will be responsible for production engineering, product development and research engineering, as well as for all manufacturing activities, tool and die facilities, and personnel activities in the manufacturing and engineering divisions of the company.

A native of Rockford, Michigan, Inwood resides today near there with his wife and two children.

●

NORTHEAST FEEDSTUFF PRICES

Prices of feedstuffs have continued to advance sharply, throughout the Northeast, during the past week. The U. S. Department of Agriculture says important strengthening influences were higher grain prices, and the more active demand resulting from wintry weather in the Central West.

Offerings of wheat millfeed for immediate or prompt shipment were scarce, with output down slightly from the previous week. Demand was not particularly urgent, but Buffalo inquiry became more active as offerings became less plentiful. New York had rather slow millfeed trading, improving toward the week's close. Prices over the Northeast showed most moderate gains at Boston, and the largest at Philadelphia. Gains on bran ranged from 50 cents in Boston, to more than $3.00 a ton at Philadelphia, with similar advances on middlings. Flour middlings were irregular.

Oilseed meal offerings for shipment this year were very scarce, and price increases were general. Scattered lots were available from resellers, and these were in active demand. Soybean meal made the greatest gains, increases ranging from $3.00 at New York to $4.00 a ton at Boston. Cottenseed meal lost 45 cents at Bosten, was steady in Philadelphia, and 65 cents higher in New York. Practically no linseed meal was available for prompt shipment, with prices rising from $2.00 in Buffalo to $5.00 a ton in Philadelphia.

Brewers' dried grains were sharply higher at all markets, the boosts ranging from $3.00 at Buffalo to nearly $8.00 at New York. Distillers' dried grains were up more moderate amounts, the grains varying over the Northeast from $1.00 in Buffalo to $3.25 a ton in New York City.

●

PRINTS DISPLAY BOOK

At a Luncheon for Eastern Members held recently at the Park Lane Hotel by the Point-Of-Purchase-Institute, fifty representatives of member Companies in the New York area were shown the first printed copies of the Institute's recently completed Survey: "How Much Do Window Displays Stimulate Sales?". It is a 40-page, full color book.

Carl Ruprecht, Advertising Manager of the Underwood Corporation, who is Chairman of the Institute's Research Committee, explained to the group the great care taken by his Committee to ensure accurate and thoroughly reliable figures in the final results. Nationally advertised products of eight leading Companies in the Drug and Hardware fields were tested, and results show that Sales were boosted by Displays in some cases more than 100%.

Murray Koff, Sales Promotion Manager of Seagram-Distillers Corp., who is a member of the Display Committee of the Assn. of National Advertisers, told how the A.N.A. had cooperated closely in planning the Survey; and while it was at first thought impossible to measure accurately the Sales Value of Displays, he said, the A.N.A. now agrees that a wonderful job has been done.

It was decided that the Institute's Annual Point-Of-Purchase Symposium and Exhibit will be considerably enlarged next May, and extended into a two or three day meeting, because of the great success and very large attendance at the Annual Symposium last May, when many people could not be accommodated who had applied for tickets.

John Palmer, President of Palmer Associates, who is First Vice-President of the P.O.P.A. Institute, presided at the Luncheon-Meeting.

●

CROWN CORK REPRESENTATIVE

The Sales Department of the Crown Cork & Seal Company, Inc. has announced the appointment of Jermone Yakel as sales representative in the State of Texas, handling the sales of the Cemac milk filler, the Dacro milk cap, and the complete line of food and drug closures.

Mr. Yakel has been with the company for ten years, having been associated in both the Credit and Sales Departments at the home office in Baltimore. Before his recent appointment to Texas, he served as sales representative for the Closure Division in Eastern Pennsylvania and Northern New Jersey. Mr. Yakel will make his headquarters at 917 Marion Street, Dallas, Texas.

●

IN CHARGE OF SALES

D. A. Snyder, director of sales for Marathon Corporation, Manasha, Wisconsin, has been named vice president in charge of sales, according to an announcement made by D. C. Everest, president and general manager of Marathon, following a directors meeting on October 15. Snyder joined the company as a field sales representative in 1929 and since then has held several executive positions in Marathon's sales division. For several years prior to his appointment as director of sales in 1946, he had charge of the company's sales of packaging to all branches of the dairy industry.

Diamond Alkali Has New Plant

New Multimillion Dollar Plant at Houston, Texas

The Diamond Alkali Company has announced that its new fourteen million dollar plant at Houston, Texas, is rapidly approaching its designed production capacity.

The new unit, under construction since the summer of 1946, has been completed at a cost of $14,500,000 and will soon be turning out 460 tons a day of liquid chlorine and caustic soda. These chemicals, derived from common salt, are flowing by pipeline, tank cars, and cylinders from this plant to industrial users throughout the Southwestern area. One customer receives chlorine through the world's largest pipeline for this purpose 10,300 feet.

Occupying a 325-acre tract 25 miles from the city along the Houston Ship Channel and situated within the shadow of the far-famed San Jacinto Monument, the plant brings numerous innovations and improvements in electrolytic chlorine and caustic soda production from both processing technique and equipment standpoints. Adequate provision has been made for enlarging the plant's production capacity through expansion of all of the facilities which comprise the present operation.

Approximately 60 percent of the tanks, towers, valves, piping, motors, machines and their structural framework are without roofs—completely outdoors—a unique feature made possible by the unusually mild climatic conditions prevailing the year 'round in Houston and vicinity. Process piping and power lines are carried overhead, permitting ready accessibility for inspection, maintenance and repair. Instrumentation has been provided to facilitate automatic control of operations wherever practicable.

●

TO ERECT MILK FACTORY

OTTERVILLE, Ont.—The provisional board of directors of the Otter Valley Milk Producers' Co-operative which proposes to erect a milk factory to process the milk production of the Tillsonburg, Burford, Norwich and Woodstock areas, plan to have the canvass for funds completed by the end of November.

This was announced by Wilfred L. Bishop, chairman of the committee and president of the Norwich local, at the annual meeting of the latter group.

After the job of canvassing is completed a site will be chosen and work on the plant commenced.

The election of officers resulted in the following being chosen: President, W. L. Bishop; vice-president, William Beecraft; secretary-treasurer, Ross McRae; directors, Frank Swaton, Merton Penny, Harry Lockwood, John Storey, Russel Winskell and Otto Hinks, Mr. Swanton and Mr. Penny replace George Barnard and C. A. Palmer, who have been directors for a number of years past.

ROGERS VACUUM PANS

A Size for Every Need

Large plants . . . small plants will find Rogers Stainless Steel Vacuum Pans a profitable installation in diversified dairy products production and increased sales. From the small 16" diameter Rogers Vacuum Pan used by colleges and laboratories, six sizes are available to meet your exact needs. Write for a copy of our new catalog.

"The Choice of Dairyland" Since 1883... Rogers

C. E. ROGERS COMPANY, 8731 WITT ST., DETROIT 9, MICH.

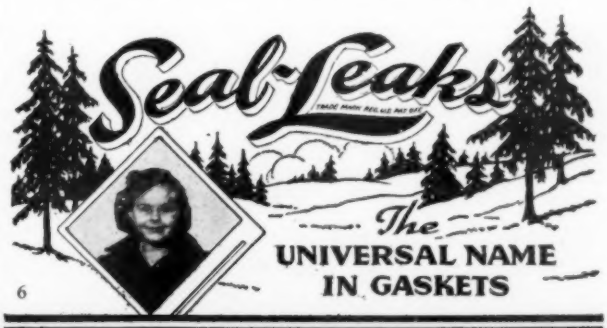
"Safety First!"

WHY NOT STOCK UP with Seal-Leaks? Thousands of canny up-to-the-minute milk plant operators,

coast-to-coast, are stocking up with genuine *Seal-Leaks.* Automatic by-the-millions cut. Exact in shape and thickness. Every conceivable size and contour—and a country wide Jobber hook-up that brings *Seal-Leaks* "just around the corner" from your plant.

In sanitary neostyle unit containers that keep them always sweet and clean. Special sizes and thicknesses promptly to order—mail your Jobber the sample.

Ask your Jobber for SEAL-LEAKS by Name.



BEAVERITE PRODUCTS, INC.
Beaver Falls, New York, U·S·A·

NEW TYPE MILK HEATER

USDA's Bureau of Dairy Industry Has Designed Small Volume Device that Has Number of Applications—Suitable for Pasteurizing, Sterilizing, and Forewarming

Price support programs make more interesting reading than a research report on E.coli, yet it is moot question which carries a greater significance for the welfare of mankind. Research work is not particularly spectacular and there are times when the expenditures for such undertakings are questioned by practical men. The work which F. P. Hanrahan and B. H. Webb have done with the resulting development of a new high-temperature milk heater is tangible evidence that in the laboratory the seeds of progress are constantly germinating.

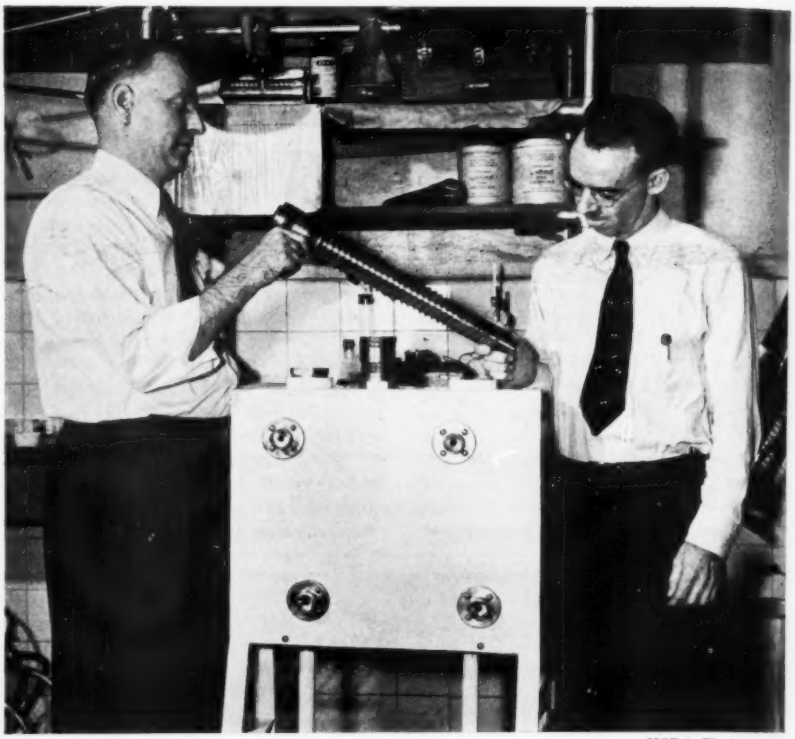
●

A NEW-TYPE milk heater which is capable of heating fresh milk to above-boiling temperatures and producing changes that can be used to advantage in many dairy manufacturing processes has been developed by the Bureau of Dairy Industry, the U. S. Department of Agriculture announced today.

F. P. Hanrahan, dairy engineer who designed and patented the heater, said it can be used to treat milk or other liquids, such as fruit juices, where a continuous flow through the apparatus is desired. The heater is suitable for sterilizing, pasteurizing, forewarming, and preheating under pressure for the purpose of spray drying, he added.

In its present form, the heater can be used as a pasteurizer for small market milk plants or cheese factories where milk is pasteurized by heating to 160-162 degrees F. for about 15 seconds. The inventor said, however, that the heater is a pilot-plant model and would need to be further developed for use in plants where a capacity of more than 2,000 to 3,000 pounds of milk per hour is desired.

B. H. Webb, dairy manufacturing specialist, used the heater successfully on an experimental basis to produce sweetened condensed milk much lower in viscosity than that from normally heated samples. In this test, the milk was preheated to 240 degrees—considerably higher than the usual preheating temperature of 180-195 degrees. Viscosity of sweetened condensed milk has an important effect on the length of time the product can be stored without excessive thickening.



USDA Photo

F. P. Hanrahan (left), dairy engineer and designer, and B. H. Webb, dairy manufacturing specialist, hold one of the two stainless steel helical screws. There is a continuous flow of milk around the screw.

Dairy investigators have known for some time that filming, or milkstone coating, occurs when milk is heated to higher temperatures. Further investigation by the Bureau showed that this milkstone formation can be partially eliminated by preheating the milk to the boiling point before subjecting it to the higher temperatures in the heater.

Another use for the heater would be in institutional research on dairy products where milk is to be heated to as high as 300 degrees, and capacity is of secondary importance.

In general, the heater resembles a small box which houses a longitudinal stainless-steel tube containing a 12-inch removable helical screw through which the fluid to be treated flows continuously. The developed length of this helical passage is 12 feet. Heat is applied through the walls of the housing and also through the screw. The passage contains 136 square inches of heating surface, with a capacity of 6.59 cubic inches (108 c.c.). When milk is pumped through the heater at the rate of 1,000 pounds per hour, it goes through the helical heating passage in 0.87 seconds with a flow velocity of 13.7 feet per second. The capacity varies with the temperature to which the milk is heated, and the heater has withstood laboratory tests using up to 500 pounds of hydraulic pressure per square inch.

The heater was first exhibited publicly at the Dairy Industries Exposition at Atlantic City, N. J., October 25-30.

The heater is registered under a public service patent, available to anyone interested. More detailed information on the performance of the heater, or working drawings showing its construction, can be obtained on request to the Bureau of Dairy Industry, U.S.D.A., Washington 25, D. C.

HITS AT SPECULATORS

Seattle Dairyman Sees "Speculative Excesses" as Damaging to Producer and Consumer Alike

PORTLAND, Ore. — Creation of a nation-wide operating organization owned, financed and operated by milk producers to guarantee the elimination of speculative excesses in dairy products was urged by Russell S. Waltz, general manager of United Dairymen's Association, Seattle, at a general session of the 32nd annual convention of the National Cooperative Milk Producers Federation.

Waltz charged that the influence of a very few people "with no particular interest in the future of the dairy industry" controls and determines prices to both consumers and producers. He pointed to such agencies as the Chicago Mercantile Exchange, the New York Mercantile Exchange and the Plymouth Cheese Exchange.

"Re-examine the movement of prices on the Chicago Mercantile Exchange for butter for the past two years," he suggested. "For whose benefit was the exchange operated? The producer? No. The consumer? No.

"Cooperatives must realize that they are actively engaged in business and must assume the responsibility of a business organization so engaged. They must strive for a more prominent position in the activities that result in the final determination of selling prices to consumers. They must either engage more actively in those artificial price controls or set up for themselves a method of determining fair prices for their member's production.

"An organization composed of producers, and directly financed by producers, can be developed to represent all producers in the market places of the nation. Such an organization would need to be financially strong enough to store manufactured dairy products during the surplus producing season, over and above the quantities that can be stored by individual cooperatives. Such an organization would remove once and for all the highly speculative activities on manufactured dairy products, whereby during the heavy producing season are driven to unduly low levels. Such an organization would be in a position to release such stored products during the short producing season as they are required by the public, thereby eliminating the unduly high price structures usually prevailing during the short production season.

"From a practical standpoint, such an organization would need a charter to operate and there would need to be some clarification of existing laws that at present can be construed to prohibit such practices. The operation of such an organization can be fully justified, as it will not only protect producers but will protect consumers."

Waltz also recommended four other factors for the stability of dairy prices at satisfactory levels:

1. Continued and broadened support of general advertising programs designed to obtain for dairy products the greatest possible share of the consumers' food dollar.

2. Dairy products of such uniformly high quality that they will merit continued consumer demand.

3. Provision of a regular, adequate supply of dairy products, regardless of season, to make it unnecessary for consumers to seek alternatives or substitutes.

4. A system of producer-owned local dairy marketing associations fully equipped with physical facilities, adequately financed, and soundly managed to exert a dominant influence upon dairy prices in their local territories.

●

Read The Want Ads

POR-TECTED for Longer Life—

Why do Superior milk cans last longer, under hardest usage? True, they're made better, of finest materials expertly crafted. Then Superior cans are "por-tected" by a special process that hardens the tinned surface... increasing resistance to break-in abuses, giving seasoned quality to new cans. "Por-tecting" assures that longer life right from the start!

WRITE FOR OUR catalog describing the complete line of Superior Dairyware.

Superior METAL PRODUCTS COMPANY
509 FRONT AVENUE ST. PAUL 3, MINNESOTA

THE DAIRY SITUATION

(Continued from Page 32)

do more experimenting with the controllng effects of open market transactions and the like?

Inflation Confused with Prosperity

One reason why brakes on inflation are applied so timidly and gingerly is that most people confuse inflation with prosperity. Perhaps if we counted the costs we would be less elated about the illusion of prosperity which an increased number of dollars flitting through our hands seem to create.

There are those who contend that we will stay on the present high price plateau indefinitely. In fact, a frequent argument is that we must stay there because of the present astronomic federal debt. To be sure, debt is easier to pay with inflated dollars, but let us not overlook the point that a high level of production is more important to debt-carrying ability than is a high price level.

Those who contend that prices should stay at present levels do not seem to be able to tell us how they are to be kept there. They also glide over rather easily the unfavorable consequences to many persons of doing so. They do not seem to realize that as inflation is prolonged it becomes more and more a capital levy on every holder of a life insurance policy, of a savings bond or other evidences of amounts due.

The safer procedure is to expect that prices are likely to settle back somewhat as supplies come into better balance with the eagerness of the market to absorb. It may be that prices eventually will level off at a point well above pre-war levels but still considerably below their present levels.

In that levelling process, however, there are many prices which tend to be quite rigid for which downward readjustment comes very slowly. These may tend to bolster the price structure, but in so doing create additional difficulties for others.

Causes of Concern to Farmers

The rigidity of many other prices causes farmers concern because they will tend to hold up farm costs in a period when farm income will be declining. They also worry farmers because the maintenance of such prices may lead to reduced activity and employment with resultant lowered income and reduced ability to buy farm products. Dairy farmers are especially affected by any situation which reduces real income and buying power of consumers because their markets feel the effects so directly.

The suggestion that it is well to be prepared for some descent from the dizzy price heights of the present does not mean that a disastrous depression is on the immediate horizon. As long as there are many unfilled wants for houses, automobiles and other durable goods, employment and income conditions should remain reasonably favorable. The defense program now projected will provide additional activity, although the use of resources for such purposes is a drain rather than a help in raising levels of living.

Indications consequently are that markets for dairy products may remain reasonably strong for some period to come. Barring extreme crop failures, feed supplies are likely to be more plentiful in the years ahead. Labor supply may be eased somewhat.

This does not mean that dairying has run out off problems. As suggested above, pricing programs in metropolitan milk sheds will bear watching. They may discourage consumption of fluid milk and invite expansion of output creating more surplus for manufactured products.

Perhaps consumers will come back into the butter market to keep up with the restoration of production as it takes place. However, it is not at all unlikely that many consumers have grown accustomed to a reduced use of butter, and they may need some wooing to get them back to former consuming habits.

Butter on the Downgrade?

Minnesota may never return fully to its former dependence on creamery butter as an outlet for its dairy products. While it is to be expected that considerable shift back to butter will take place, the state is better equipped than before with larger and more flexible plants with a wider choice of products. Our output of cheese, condensed milk and dried milk likely will remain well above former levels.

War requirements led to a decided swing to sale of whole milk rather than cream by farmers, and to providing enlarged facilities for drying of both skim and whole milk. Purchases by the government for overseas demands cannot be expected to continue indefinitely. While domestic uses of dried milk are developing, their producers need to concern themselves about expanding markets to replace government purchases as the latter taper off.

Farmers who have become accustomed to greater returns because of fuller utilization of their milk for human food will not relish having to return to animal feeding of skim and buttermilk. Continued markets are even more vital as far as the plants are concerned. Leading dairy areas, such as the Middle West which possess advantages in dairying, should not overlook any possibility of developing markets in areas where local supplies are inadequate or can be produced only at relatively high costs.

As inflation tapers off, selling will become more of a job of finding markets and less one of merely filling orders. When that time comes, the advantages possessed by efficient producers of quality milk and by efficient plants will increase. The dairy industry of Minnesota can improve upon its competitive situation by increasing the economy and efficiency of production and handling both on the farm and in the plants.

It may have been noted that no reference has been made to government price programs in the preceding review of prospects for dairying. Price supports are in the picture today, and legislation now on the books provide for their continuation on a reduced basis for the longer run. That program is subject to change and many anticipate that radical changes may be made in it.

The Question of Price Supports

As prices move down, demands no doubt will be made to strengthen and increase price supports. It is to be hoped, however, that we will not make the error of assuming that this is a matter which can be solved merely by "passing a law." Consideration needs to be given to the effects of artificially high prices on both consumption and production. Their inevitable result is surplus and surplus either means waste of resources or some form of control of disposal or production or both.

Disposal programs which will not interfere with regular market channels are not easily devised. Restriction of output means placing control over use of agricultural resources in government hands rather than leaving decisions in the hands of the farm operators. It likely also means some control over plant operations.

Farmers have shown no great affection for such controls, but they cannot expect to escape them if they insist on arbitrary price maintenance. If farmers insist on having the sweets of artificially maintained prices, they might as well expect to have to take some of the bitter in the form of controls.

Moreover, farmers and citizens generally need to concern themselves about fostering and supporting public policies which lead to the fullest and best use of resources rather than to artificial markets. Dairy farmers will do well to concentrate more of their attention on programs to maintain a healthy situation in the economy generally.

The road to better levels of living is paved by larger and more efficient production and better distribution of the resulting income. The best assurance of a strong market for dairy products is a high level of real income earned by a high state of productive activity generally.

XUM

DECISIONS ON THREE MARKETS

Department of Agriculture Takes Action on Cincinnati, Toledo, and Tri-State Markets After Hearings

THE U. S. DEPARTMENT of Agriculture recently issued a decision on proposed marketing agreements and orders regulating the handling of milk in the Cincinnati, Ohio, the Toledo, Ohio, and the Tri-State (West Virginia, Ohio, and Kentucky) marketing areas. This action is subject to industry approval and if approved would establish emergency floor levels for prices for Class I and Class II milk during the next few months. (The Tri-State marketing area comprises the city of Ashland, Kentucky; the cities of Huntington and Parkersburg, West Virginia; and the cities of Marietta, Ironton, and Gallipolis, and Athens and Scioto Counties, Ohio.)

Emergency Hearings Held

Need for such action was revealed at emergency public hearings held during the week of November 1. Evidence presented at the hearings showed an unusual decline (89 cents per hundredweight between July and October) in the prices paid by condenseries for milk. Since this decline occurred at a time when condensory prices normally increase, it has resulted in an unexpected decline in the minimum prices for Class I and Class II milk, which are based on the condensory price level. Without some action to correct this situation, an adequate supply of milk could not be assured for these areas.

The amendments to the Tri-State and Cincinnati orders would maintain floors for Class I and Class II prices at approximately the October 1-15 level through January, 1949, and at a level 22 cents lower during February, 1949. At Toledo the Class I and Class II floor prices would be at the October 1-31 level through January, 1949, and 22 cents lower during February, 1949.

Proposed Floor Prices

The proposed floor prices per hundredweight for Class I milk from the effective date of the amendment through January 31, 1949 are as follows: Cincinnati — $5.40; Tri-State—$5.00 at Huntington district plants and $4.80 at other plants; Toledo—$4.70. For the month of February, Cincinnati—$5.18; Tri-State—$4.78 at Huntington district plants and $4.58 at other plants; Toledo—$4.48. Prices for Class II milk would be, from the effective date of the amendment through January 31, 1949, as follows: Cincinnati—$4.95; Tri-State—$4.70 at Huntington district plants and $4.50 at other plants; Toledo —$4.10. Class II prices for the month of February would be Cincinnati—$4.73; Tri-State—$4.48 at Huntington district plants and $4.28 at other plants; Toledo —$3.88.

The action announced today is authorized by the terms of the Agricultural Marketing Agreement Act of 1937. A purpose of this act is to enable the establishment by the Secretary of Agriculture of prices to be paid by dealers to producers for milk.

In exercising this authority, the Secretary is required by the Act to set such prices as will (1) reflect food prices and supplies and other economic conditions which affect market supply and demand for milk, (2) insure a sufficient supply of milk, and (3) be in the public interest.

●

OHIO RESEARCH FOUNDATION

E. C. Raney, President of Ranco Inc., was elected to the Executive Committee of the Ohio State University Research Foundation when the Foundation's Board of Directors held its annual meeting at Ohio State University recently. Mr. Raney has served on the Foundation since March, 1948, when he was appointed an Alumni Member.

Since its organization over 12 years ago the Research Foundation has maintained a strong, active program of cooperation with other agencies, either industrial or governmental, in researches of value to both the University and the sponsoring organization for the discovery or application of basic information for the further development of industry and the improvement of this country's welfare. During the past year, 50 industrial and 70 government contracts were administered. The latter group included cooperation chiefly with the Air Materiel Command and the Navy.

Mr. Raney, whose company for many years has been the world's largest manufacturer of refrigeration controls, received his degree in mechanical and electrical engineering from Ohio State in 1912. He developed the refrigeration and automobile heater controls which his company now manufactures, as well as the automatic reclosing circuit breaker which it previously produced.

●

LOW MILK CONSUMPTION

OTTAWA, Ontario — Canadians are approaching a "serious low level" of milk consumption, Dr. L. B. Pett, dominion nutritionist stated recently.

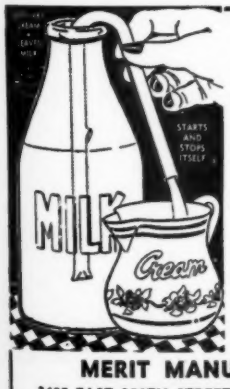
Dr. Pett's warning was based on the latest official figures on fluid milk sales published by the bureau of statistics, showing continuation of a downward trend which bagan late in 1946.

Per capita consumption of milk alone in cities was 0.61 pints in August, down from 0.66 pints in August, 1947, and 0.74 pints in August, 1946.

Dr. Pett described the latest per capita figure as being 40 to 50 percent below the desirable level of milk consumption.

He conceded this was still much higher that pre-war, but added that the hope and aim of nutritionists had been to see Canadians reach and maintain a per capita consumption nearly double the inadequate pre-war level.

"Just when we were approaching that level we started to slacken off," Dr. Pett said. The "obvious" reason for the decline, he said, was the higher prices of milk and other items in the family food budget.



USEFUL — INTERESTING

An Ideal Christmas gift

MAGIC CREAM SIPHONS for home use, remove cream from bottled milk for use with coffee, cereals and desserts.

PLEASE OLD CUSTOMERS — WIN NEW ONES

Leading dairy firms find Magic Cream Siphons a welcome sale booster aid. Homes using a cream remover consume more milk when they learn how many dishes are improved by the liberal use of milk instead of water.

Free sample for round or square bottles.

GLASS $15 per gross. $100 per 1000.
ALUMINUM $17.50 per gross, $115 per 1000

Complete Satisfaction Guaranteed

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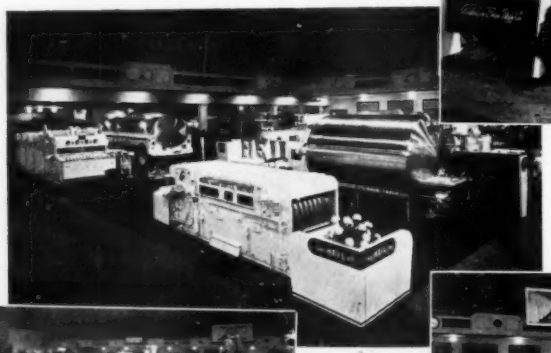
Pictured on this page are some of the fine exhibits that characterized the recent Dairy Industries Exposition at Atlantic City. These are only a few of the more than three hundred and fifty displays that filled the huge Convention Hall.

Anderson Brothers Manufacturing Company



The Heil Manufacturing Company

Owens-Illinois Glass Company

Chocolate Products Company

Girton Manufacturing Company

De Laval Separator Company

Milk Industry Foundation

Sealright Incorporated

One of the features of the show was the display of old fashioned and unusual dairy equipment. The collection has been the hobby of David Gwinn, President of the Pennbrook Milk Company in Philadelphia.

SOUND AGRICULTURE—BRANDT

National Cooperative Milk Producers Federation President Says Sound Agricultural Prosperity Is a Must

PORTLAND, Ore. – A sound agricultural prosperity is absolutely essential to the prosperity of the nation as a whole, and attempts to deflate farm prices are taken at the risk of deflating our entire economy and lowering our standard of living, John Brandt, president of the National Cooperative Milk Producers Federation, said here today.

Brandt, who is also president of Land O' Lakes Creameries, Inc., Minneapolis, spoke at the annual meeting of the Federation, an organization composed of cooperative dairy organizations throughout the country.

In demanding a sound and sensible agricultural program, he said that attempts to deflate farm prices, and at the same time maintain a high standard of income for labor and industry, will stretch the economy of the nation to the extent that it will break.

He pointed out that despite a clamor over high prices, more food is being consumed by more people today than ever before.

"Citing the example of just one farm product," he said, "bears this out. During 1947 and early 1948 we had probably the highest prices for meat in our history. Yet in 1947 consumption of meat amounted to 155.5 pounds per capita. In 1934, when farmers were almost giving their livestock products away, per capita consumption in this country was 143.1 pounds.

"Analysis of consumption and price relations of agricultural products will disclose many similar situations, all of which are proof that the standard of living, no matter how much we grumble about it, definitely follows the path of farm income."

Cooperative organizations, he said, must be ready to battle against the attempts of the National Tax Equality League to tax the investments of farmers in the capital structure of their cooperatives.

"Such a tax, which is advocated by those who want to stifle the growth of farmer-owned and controlled cooperative marketing organizations," he said, "would be contrary to all existing laws governing capital investments in general business enterprises in the United States.

"The National Tax Equality League will spare no effort in its attempt to force the farmer into a position of being a mere individual in the field of production. The League, whose members are imbued with the inflated idea that certain men were born with the God-given right to pre-empt the field of merchandising of agricultural products, really believes that farmers were put on earth merely to serve them and as slaves to feed the rest of the world. The organization of farmer cooperative marketing associations has taken much of the profit out of the processing and merchandising of farm products and, through their action in this field, have benefited both producers and consumers."

Other highlights in Brandt's address:

. . . The present parity formula for farm products is neither equitable nor sound, and the present method of supporting agricultural prices from tax money is wrong. The long advocated program of a self-help holding pool for surplus agricultural products, financed by the farmers through an equalization fee assessment, is the only sound and workable method to accomplish the desired end.

. . . Assistance to foreign countries should not create a paternalistic dependence on the part of those we desire to help, but should be designed only to stimulate and encourage self-help and free enterprise.

. . . The Taft-Hartley law should be given every chance to work, because it is the first step in the protection of the rights of employee and employer alike.

DAIRYMEN'S LEAGUE HEAD

Succeeding the late Henry Rathbun as President of the Dairymen's League, Leon Chapin brings to the organization a lifetime of experience with cooperative organization and the milk business.

RECOMMENDATION ON CASES

A proposed Simplified Practice Recommendation for Delivery Cases for Square Glass Milk Bottles (as covered by Simplified Practice Recommendation R10-47) has been submitted to producers, distributors and users for approval or comment, according to an announcement of the Commodity Standards Division of the National Bureau of Standards.

Proposed by the Milk Bottle Crate Manufacturers Council, after considerable research and study, the recommendation covers the sizes of delivery cases for square glass milk bottles. Three primary objectives to be considered are:

1. Proper pocket size to accommodate bottles of standard dimensions.

2. Proper overall dimensions to facilitate interchangeability of stacking of cases of different manufacturers.

3. Maintaining the overall dimensions of the case at a minimum to permit space saving in dairies, trucks, etc.

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Generate Dry Low Cost Steam with the Proven Service and Safety of Leffel Scotch Type Boiler and Leffel Ram Type Stoker

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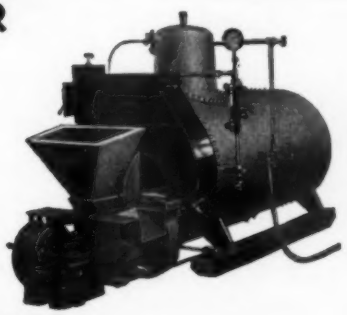
Available in sizes 6 to 250 H.P. inclusive normal (not inflated) rating,– and built with many plus qualities exceeding A.S.M.E. and State Boiler Codes.

Write, wire or phone us for full particulars.



THE JAMES LEFFEL & CO. Established 1862 **Springfield, Ohio**

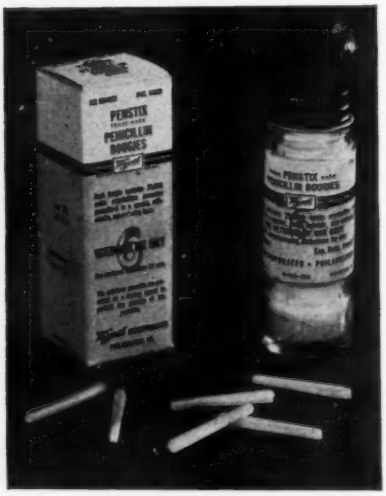
See Leffel Boiler Ad on Page 81 Dept. AMR

USING OUR SEPARATOR • ITEMS OF INTEREST SKIMMED FROM HERE AND THERE

Penicillin for Mastitis

PENSTIX, new penicillin treatment for mastitis, No. 1 enemy of the dairyman, has just been announced by Wyeth Incorporated, Philadelphia.

Developed in the animal products division of this company, Penstix consists of a self-lubricated bougie, containing



25,000 units of pure active crystalline procaine penicillin G in a milk-soluble base, according to the manufacturer. Treatment is administered by inserting the Penstix directly into the teat canal of the infected quarter, with repetition after every milking until the infection has disappeared. Wyeth recommends the insertion of Penstix at least once or twice after the animal seems to have recovered.

Package circular directions state that there is no risk of using too many Penstix and that they will not damage the lining of the udder.

Penstix may be stored conveniently in the barn, milk house, or any convenient cool, dry place away from sunlight, and need not be kept under refrigeration, the Wyeth circular states.

•

Turbine Pump

A NEW TURBINE pump for small diameter deep wells which is capable of developing water capacities up to 5,000 gallons per hour from depths as great as 200 feet, is announced by the Peerless Pump Division of the Food Machinery and Chemical Corporation. This new pump, according to reports from the manufacturer, designated as the "Peerless Champion," fills the gap in water production from deep wells four inches in diameter and larger which is often found between "domestic" water systems and the larger types of deep well turbine pumps.

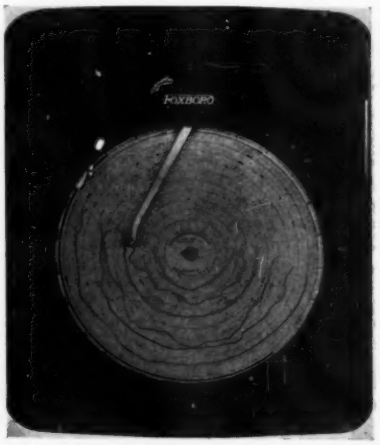
The Peerless Champion is an open line shaft pump; bowl and shaft bearings are lubricated by the well's own water. No oil is used underground. Semi-open impellers, streamlined porcelain-enameled bowl sections, rubber bearings all add to its water lifting with minimum losses due to turbulence. All shafting is stainless steel. Utilization of long cutless fluted rubber shaft bearings, spaced every five feet, are resistant to normal sand and abrasive conditions. Impellers are die cast bronze, hand finished and balanced.

The Peerless Champion is completely described and illustrated in a new Bulletin, No. B-200, which may be had by writing the manufacturer, Peerless Pump Division, Food Machinery and Chemical Corporation, care of this publication.

Hold Your U. S. Bonds

Multi-Record Dynalog

THE MULTI-RECORD DYNALOG Electronic Recorder of The Foxboro Company, Foxboro, Mass., was exhibited for the first time at the recent I.S.A. Instrument Show in Philadelphia. It is a high-speed instrument, completely electronic in principle, making from one to six different records on one circular



chart, the records being of colored dots so closely spaced as to make virtually continuous lines. The Recorder has only one measuring system, either resistance bulb or EMF type, but a positive-acting switching unit automatically brings the vari-colored pens into recording position at 6-second intervals, in any sequence desired. The sequence and number of points may be changed at will, quite easily. Complete color-coding prevents possible mis-mating of circuits and pens.

An innovation in the design of the recorder is the use of its Rotacolor Pen Wheel holding the six recording pens, which are magnetically selected in turn

Cottage Cheese
tastes better, lasts longer, costs less when you make it with
F-L Coagulator
1 quart size . . . enough to coagulate 4,800 gallons of skim milk . . . only $5.00
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and held in recording position by a single pen arm. The Multi-Record Recorder may be used for measurement of temperature, pressure, humidity, liquid level, pH, conductivity, speed, and other process variables. A special "dry ink" insures clean recording.

Other features of the Multi-Record Dynalog are explained in illustrated Bulletin 428, which will be sent on request.

●

Danish Spray Dryer

SPRAY DRYING EQUIPMENT of Danish design is now available in this country through Niro Corporation, an American Firm that has opened offices recently in New York City.

Niro's office staff includes designers and construction engineers trained at Copenhagen who will produce spray drying plants in this country under rights from the Danish originators, Niro Atomizer, Ltd.

Outstanding feature of the Niro method is the atomizer head. This is a specially designed, high-speed rotary head which ejects the liquid product as a mist into the drying chamber. Circulating hot air seizes the mist as it enters the chamber and evaporates its water content. The dry content falls to the bottom of the chamber as a fine powder and is funnelled out as a finished, easily soluble product ready for packaging and sale.

Another feature of this equipment is its ability to produce powders with very high bulk densities when it is required. Pipes, ducts or other parts of the system do not clog even when drying viscous substances of pasty structure or under other severe working conditions, the company states. Moreover, operation of a Niro installation, while continuous, requires a minimum amount of attention. One person is sufficient for attendance of an entire plant.

Supplementing a comparatively low first cost, the company claims that its system may bring about important simplifications of production methods in the processing of milk and milk products. In addition to the construction of spray drying plants, Niro offers preliminary overall production planning through its consultation and engineering services. Chemical experiments and spray drying trials in the planning of new productions may be undertaken in the research and experimental laboratory.

Literature describing the method and its systems is available to interested manufacturers on request to Niro Corporation.

●

Small Clarifier

A NEW 1200 LB. per hour centrifugal milk clarifier has just been announced by Rite-Way Products Company of Chicago, widely known for "Triumph" Clarifiers. Designed especially

for the smaller plants, whose capacity does not warrant use of larger clarifiers, the new unit has the same bowl type found in the larger "Triumph". Rite-Way reports numerous plant tests show that the clarifying efficiency of this new unit compares favorably with that of larger models and is well adapted to clarification of milk before or after homogenization. The bowl contains no discs, has only one internal part to clean and features an extremely large sludge holding space. Available also is an extra bowl for converting the clarifier to a cream separator. For further details, readers should address the manufacturer: Rite-Way Products Co., care of this publication.

●

Platform Truck

THE RAPIDS-STANDARD Company, Inc., material handling equipment manufacturers of Grand Rapids, Michigan, announce production of a heavy duty platform truck tradenamed "The Freighter".

Two other platform trucks manufactured by the company are the medium duty "Warehouser" and the light medium duty "Handy-Andy".

The new Freighter platform truck is available in seven platform sizes with either Rapid-Flame Hardened nicro-steel, molded-on cushion rubber, or Durastan resinoid wheels. Individual weights of the truck in various sizes vary from 167 lbs. to 242 lbs.

Features of the new truck include welded steel axle housing on the running gear, 16″ diameter load wheels with 3″ face, Hyatt type roller bearings with hardened inner and outer raceways on both load wheels and casters with zerk fittings for pressure grease lubrication.

Casters on the new truck are bolted to a welded steel bolster, which is lagged to the side and end rails. The deck is of 1″ hardwood (¾″ dressed).

Handles on the truck are ¾″ pipe or straight steel or wood stake. Capacity of the new truck with nicro-steel wheels is 5,000 or 6,000 lbs. depending on the caster model chosen. With Molded-On cushion rubber wheels the capacity is 2,960 lbs. or 2,680 lbs.

Kurly Kate
METAL SPONGES
Designed especially for cleaning all types of dairy equipment and utensils. Will not rust or splinter, cut the hands or injure metal or plated surfaces. Kurly Kate Metal Sponges are fast working, easy to use, and easy to keep clean. Made in STAINLESS STEEL, NICKEL, SILVER and BRONZE.
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2215 S. MICHIGAN AVE. CHICAGO 16, ILL.
ORDER FROM YOUR JOBBER OR WRITE DIRECT
Kurly Kate
stainless metal sponge

Frigidaire Cabinet

FRIGIDAIRE DIVISION of General Motors announced during the Dairy Industries Exposition a new line of Frigidaire Ice Cream Cabinets.

The models making up the new line were designed by Raymond Loewy, in-

dustrial designer, in collaboration with Frigidaire engineers, and reflect the suggestions and ideas of Ice Cream Industry executives.

In announcing the new line, P. W. Budworth, Manager of Ice Cream Cabinet Sales, said that the new models will provide the retailer with up to 34 percent more usuable storage capacity. The new line will be produced in single and double row cabinets. Sizes include four, six, eight and 10-hole models. Storage capacity ranges from 6.2 to 17.1 cubic feet.

•

Scholar's Microscope

AN IMPROVED MICROSCOPE for teaching — the Spencer Scholar's Microscope — is announced by American Optical Company, Scientific Instrument Division, Buffalo, N. Y. The new instrument, the announcement adds, will also prove useful in the industrial field where transparent materials are to be examined.

The illuminator is built into the base, thus making the microscope independent of daylight variations. The microscope may be moved anywhere on the laboratory table, from one observer to another without disturbing illumination or other adjustments. Using a low priced, easy to replace, standard, 10-watt bulb, it provides a uniform light source and a wide angle of illumination.

All parts (objectives, eyepiece, stage clips and body tube) may be locked in place to avoid loss or damage. The instrument may be lifted by any part without any danger of the microscope arm and body separating.

•

Spreader-Type Stoker

COMPLETE, economical combustion of any grade of coal, is possible with the recently announced Westinghouse "Centrafire" spreader-type industrial stoker.

In the new stoker, coal is trajected by an air cooled, hydraulic motor-driven rotor so that it falls evenly over the entire length of the grate. Undulation of the central grate keeps the fuel bed active and moving toward the ash discharge grates at the sides. Ashes are discharged from the furnace without interrupting the coal feed, reducing load or loss of steam pressure.

A deficiency of primary air rising through the central Link-Grate is deliberately maintained. Resulting monoxides are burned in a turbulent secondary air supply above the trajectory of incoming fuels. An increased supply of the metered primary air is admitted through the side areas of the grate and ash-discharge grates to provide complete combustion.

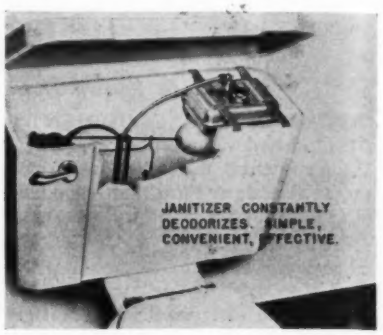
Coal is fed to the rotor by two long-stroke, slow-speed rams. A coal-feed equalizer plate driven from the rotor oscillates across the incoming fuel.

One constant speed motor or turbine supplies oil pressure for all controls and drives. Eliminating all chain drives, this hydraulic drive permits maintaining accurately any preset fuel-air ratio.

Additional information may be obtained from the Westinghouse Electric Corporation, care of this publication.

Dispenser and Deodorant

JANITIZER, a commode dispenser and deoderant manufactured by General Scientific Equipment Co., constantly deodorizes cabinet toilets to provide maximum sanitary conditions. It is approved by local health inspectors. The dispenser



can be installed in any commode flush tank in one minute. It is concealed out of sight so that it cannot be tampered with. There are no moving parts and no maintenance is required, according to the manufacturer.

Super-strength liquid drips through overflow pipe into bowl. Refilled every 25 days in readily accessible dispenser, they eliminate the need for monthly services of outside organizations.

For complete information about Janitizer write to General Scientific Equipment Co., 2700 W. Huntingdon Street, Phila. 32, Pa.

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Valve Booklet

SECTION 5 of Valve Reference Book No. 39 has just been issued by Homestead Valve Manufacturing Co., Coraopolis, Penna., covering the Homestead-Reiser "Self-Seald" Lubricated Plug Valve. It offers general catalog data, descriptions, specifications and prices on the units, parts and accessories.

Better **DRY MILK**

AT LOWER COST

DRY MILK MACHINES

Built in Five Sizes

The patented, glass-smooth, "20-year cylinders" give years and years of maximum production of a superior dry milk at the lowest possible cost.

Many other exclusive features insure long life with low steam and power costs.

Complete details upon request.

OVERTON MACHINE COMPANY

DOWAGIAC MICHIGAN

For Finest Texture and Flavor

MARSCHALL COTTAGE CHEESE COAGULATOR

in tablets

Economical — easy to use the right amount of rennet every time. Use 1 tablet for each 1000 lbs. of milk. 100 tablets $4 at your dealer's.

Marschall Dairy Laboratory, Inc.

MADISON 3, WISCONSIN

Dairy Merchandiser

TWO NEW DISPLAY and merchandising cases will be introduced by REVCO, Inc. Deerfield, Michigan, during the early part of 1949. The Ice Cream Merchandiser is a low-temperature, case that has 6.2 cubic feet capacity.

The Dairy Products Merchandiser is a high temperature refrigerated case, especially designed to keep dairy products at the proper temperature.

Complete information, specifications and other details may be procured by writing direct to REVCO, Inc., care of this publication.

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A TRIP WITH THE EDITOR

(Continued from Page 13)

be properly trained in order for the scheme to work. For example, the first load in the door way of the cold room is the wholesale load. This is on sort of pallet that has wheels on the rear and feet on the front. A two wheeled carriage must be hooked on in front in order to move it. The carriage has a definite spot where it is kept. It is perfectly simple when the carriage is there but not so simple if the carriage is not there. The point of the discussion is the fact the the carriage *is always where it is supposed to be*. "Oh, you have to tell them once or twice and then they fall in line", Mr. Buscette says.

Low Loading Platform

The loading platform is about the height of a crate lower than the floor of the trucks. A rail about two inches off the platform floor prevents the dollies from going off the platform when they are backed up to the truck. We asked Mr. Buscette about the fact that the platform was lower than the truck floor and asked him why he didn't have a flush platform. His argument was that when the dollies are loaded five high the driver lifts the first three cases down on to the floor of the truck, the fourth case is flush and the last case is the only one that has to be lifted. He said he thought that it was just as difficult, if not more difficult, to lift cases from an awkward height, which would be the situation as far as the top case was concerned on a flush platform, than it was to lift the last case a foot under his present arrangement.

Business Stresses Quality

These details of every day operation, carefully thought out and well executed, were characteristic of the dairy. We noted a number of items, large and small, that in the aggregate spelled progress. The driving force at Michael's is the conviction that quality products are the products that sell. When the trucks are on the road they are not just ordinary dairy trucks, they are the smartest, cleanest trucks one could wish for. When a specialty, like eggnog, is offered to customers it is not just another eggnog, it is just about the best eggnog a person can buy. When customers come to the plant, they see not just another milk plant, they see a plant that scores 52 out of 52 and doesn't need screens. These things add up in a customer's book. Somebody begins to get a reputation.

Not long ago Mr. Buscette tackled his surplus problem. Summer surplus that went into cream and skim was taking an unwelcome bite out of the profits. There were various ideas on how to lick the problem but the ice cream mix showed the most promise. So Michael's Dairy is in the ice cream mix business. It isn't a big undertaking but it is a quality proposition and it takes care of the surplus.

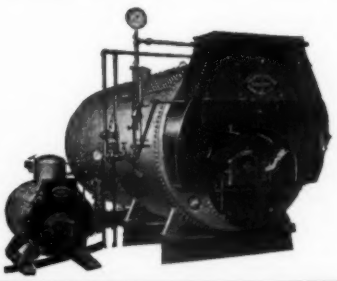
Then there were the ads. An advertising man prevailed upon Mr. Buscette to try a series of ads. He tried the ads and didn't like them. He proceeded to write his own copy. We saw both the packaged ads and the home grown variety. The pros weren't even in the same league.

Last year Mr. Buscette pulled off an advertising stunt that set the town talking. A firm of photographers approached him with a proposition. Any family in the city was to be offered the opportunity of having pictures taken of their children with the guarantee of one free picture. If families wanted more than one picture they could purchase them from the photographer but one picture was to be free. The offer was to be made in the name of Michael's Dairy and Michael's was to foot the bill for the free picture. Mr. Buscette considered the scheme. It looked reasonable providing the photographers did what they said they would. Mr. Buscette agreed to participate in the undertaking but stipulated that there should be no pressure brought to bear on parents to take more than the free picture, if they wanted to buy extra prints that was up to them, but no sales talk.

The offer was advertised in the papers and was a whopping success. More than 1800 mothers brought their offspring to the temporary studio during the three day period that the opportunity was available. After the parents had selected the picture they desired from proofs, the finished picture was delivered, note this touch, by Michael's routemen in fresh uniforms. It was a stunt that could have back fired if not handled intelligently. But it was handled with finesse. The newspapers picked it up, the local radio commented on it, and the back yard grapevine really went to town. As we have mentioned before and as this project demonstrated, when it comes to selling milk it is hard to beat children as the basis for the campaign.

In a brief and not too brilliant a way, that is the story of Michael's. We don't feel that our story really catches the intangible quality that was so impressive. There was a great deal more than a fine clean plant, more than smart advertising, more than well maintained trucks. There was an open mindedness, an eagerness to listen, to seek out new ideas, new angles, that was about as stimulating as anything that we have encountered in many a day.

LEFFEL SCOTCH TYPE BOILER



Universally accepted and used as the Ideal Boiler for MILK PLANTS where Economical Service, High Efficiencies and Lowest Maintenance Costs are required.

Built in sizes 6 to 250 H.P. with plus qualities exceeding A.S.M.E. and State Boiler Code Requirements.

Properly designed for firing with COAL (hand fired, or with the specially designed LEFFEL STOKER) OIL, GAS and WOOD.

Write for Bulletin 236.

THE JAMES LEFFEL & CO., Established 1862 **Springfield, Ohio**

See Additional Leffel Stoker Ad on Page 77 — Dept. AMR

WANTS and FOR SALES

Classified Advertising Rates

(Remittance MUST Accompany Order)

Position Wanted

50 word maximum, 50c — 2c for each additional word.

All Other Advertisements

Lightface type: 5c per word ($1.00 minimum).
Boldface type: 10c per word ($2.00 minimum).
(The name and address should be included in counting the words)

Keyed Address

25c additional in the United States.
50c additional in Foreign Countries.

When replying to any of the following keyed advertisements please address replies to:

BOX NO..... AMERICAN MILK REVIEW
175 CHAMBERS STREET NEW YORK 7, N. Y.

(The deadline for Classified Advertising is the 20th of the month preceding publication.)

No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)

FOR SALE — EQUIPMENT

FOR SALE—At our Staten Island Warehouse and Shop we have a good selection of Pasteurizers, Coolers, Bottle Washers, Bottle Fillers, Can Washers, Storage Tanks, Heaters, Separators, Weigh Cans, Filters, Ice Cream Freezers, Homogenizers, Vacuum Pans, Churns, Pumps, etc. Save money by considering good Used and Reconditioned Equipment. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. Telephone MUrray Hill 2-4616. 12-M

FOR SALE—1 New Mojonnier Tubular Heat Exchanger model 96-5, S.S. jacket, capacity 22,000 lbs. skim per hour 45°-178° F. 96-15/16 I. D. tubes 5 ft. long. Includes panel board, instruments, valves, etc. 2 De Laval model 61 steam-driven separators. 1 De Laval model 71 steam-driven separator. R. O. Phillips, Wyeth Incorporated, Mason, Michigan. 12-M

FOR SALE—1 Purity can washer, 3 cans per minute. 1 DeLaval cream separator No. 30. 1 John W. Ladd pressure bottle and can washer combined, 3 cases per minute. 1 200 gallon Lo-Vat glass lined Pfaudler pasteurizer. All in good working order. 1 Specialty Brass automatic bottler and capper used less than one year; 28 qts. per minute. 1 9 ft. surface milk cooler, 16—1½ inch water pipes and 6—2 inch direct expansion pipes covered with German silver. A lot of milk bottles and cases, quarts, pints, ½ pints. 600 gallon copper receiving vat and many other things. John D. Edelman, 235 E. Walnut St., Nazareth, Pa. 12-M

FOR SALE—One 300 gallon R. G. Wright Two Compartment Visco-Creamvat of all stainless steel construction with cooling coil in jacket. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 12-M

FOR SALE—Used milk plant equipment. Fine selection. Otto Biefeld Co., Watertown, Wisconsin. 12-M

FOR SALE — Sturdy-Bilt Washer (4 wide) can be seen in operation. Reason for selling — too small. HARTMAN DAIRY, Pittsburgh 16, Pa. Phone Colonial 204. 12-M

FOR SALE — EQUIPMENT

FOR SALE—1 stainless seel Cemac No. 14 milk bottle filler and capper, variable speed capacity up to 100 quarts per minute. Perfect condition. New York City, best offer takes same. Box 372, care this publication. 12-M

FOR SALE — Mojonnier Stainless Steel Direct Expansion Cabinet Cooler with 4 wings each 24 tubes high, also Cherry-Burrell Junior Cabinet Cooler with 7 wings each 36 tubes high. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 12-M

REBUILT — Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Ave., Cleveland 15, Ohio. 8-M-t.f.

FOR SALE—Reconditioned and guaranteed Mojonnier stainless steel, 12 Spout Vacuum Filler and Capper, Model 90RH for one-half pints, pints, quarts and one-half gallons. Will handle up to 90 bottles per minute. Complete with vacuum pump; inlet and outlet conveyor with stands and stainless steel covers; and stainless steel accumulating table with separate drive. PRICED LOW FOR QUICK SALE. The Filter Paper Company, 2460 S. Michigan Ave., Chicago 16, Illinois. Telephone CAlumet 5-8900. 12-M

FOR SALE—2240 gallon Heil Stainless Steel Truck Tank with mounting. Also 2000 and 3000 gallon Pfaudler Horizontal Glass Lined Storage Tanks. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 12-M

3-compartment Girton Case Bottle Washer—Handles ½-pt., pts., qts., ½-gallons. Good Condition. Bob White Dairy, 1809 W. Division, Decatur, Illinois. 12-M

FOR SALE—Four 550 gallon "Lifetyme (Alloy Products Co.) Vertical Coil Vats, all stainless steel construction. Lester Kehoe Machinery Corportion, 1 East 42nd Street, New York 17, N. Y. 12-M

FOR SALE — EQUIPMENT

FOR SALE — Five 400 gallon Pfaudler Horizontal Stainless Steel Insulated Tanks with agitators. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, N. Y. 12-M

FOR SALE — MISCELLANEOUS

FOR SALE—REFRIGERATED EQUIPMENT. Sell more milk with Display Milk Cabinets; Milk Bottle Storage Coolers; Beverage Coolers; Store Display Refrigerators; Milk Service Crate Storage Cabinets; Under-Counter Cabinets; On-the-Counter Display Cabinets; Display Cabinets; Display Cases; Milk Can Store and Restaurant Cabinets; Milk Pump Cabinets; Combination Refrigerator and Frozen Food Cabinets; Combination Bottle Cooler and Refrigerator Cabinets; Open-Type Milk Display Cabinets. Display More—Sell More. Powers Equipment Company, 305 York Road, Jenkintown, Pennsylvania. 12-M-3

Divco Floor Mats, old style per set $6.50, 1946—1948 per set $7.25, F.O.B. Buffalo. Satisfaction guaranteed. Iroquois Mat Co., 700 Swan St., Buffalo 10, N. Y. 12-M

FOR SALE—Chocolate Milk made with Bradway Non-Settling Chocolate Syrup and Powder is superior. Place your trial order now. BRADWAY CHOCOLATE COMPANY, New Castle, Ind. 7-M-t.f.

FOR SALE—Used milk bottle crates. Can deface old name and rebrand. Write or phone for present day inventory. Ohio Creamery Supply Co., 701 Woodland Ave., Cleveland, Ohio. 7-M-t.f.

FOR SALE — INSULATED MILK TRUCK BODIES for farm pick-up. Write for prices and deliveries. Millington Truck Body Co., Inc., Millington, Mich., Huntington, Ind.; Sparta, Wisc. 12-M-8

FOR SALE—Truck lettering and trademark decals, made for your truck and store advertising. Easy to apply; uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 So. Harvey, Oak Park, Illinois. 12-M-4

BUSINESS OPPORTUNITY

FOR SALE—Modern tile ice cream and dairy plant. 3,600 square feet. 30 HP boiler, oil burner. Well equipped ice cream and dairy sales bar with substantial gallonage. Tile barn 3,400 sq. ft., 2 tile silos. Stone barn 2,200 sq. ft., 60 acres, approximately 40 suitable for development. In West Caldwell, Essex County, N. J. Price $60,000. Box 371 care this publication. 12-M

FOR SALE—Dairy plant in Western Tennessee, doing $250,000 to $300,000 yearly sales. Business 43 years old, building 2 years old. Practically all new equipment for pasteurized and homogenized milk. Six trucks, four of them new. Reason for selling, bad health. Price $75,000. Box 370, care this publication. 12-M

FOR SALE—Old established, well known dairy. Modern processing plant equipped to pasteurize, homogenize and bottle. Processing 300 gallons daily. Several routes. 3 delivery trucks. 2 modern homes, 4 garages, dairy barn. All buildings are in excellent condition. Located on 3 acres just outside Denver city limits. For information write William Koneman, JACK WEHNER REAL ESTATE, 4312 W. 38th Ave., Denver, Colorado. 12-M

BUSINESS OPPORTUNITY

FOR SALE—Small milk bottling plant and dairy ice cream store. Excellent business and location. Write John W. Gnagey, Somerset, Pennsylvania. 12-M-2

Retail and Wholesale Dairy, Wholesale Ice Cream Business, and Dairy Bar. Southern Michigan. Excellent Opportunity. Price For Quick Sale. Box 369, care this publication. 12-M

FOR SALE—In North West Gulf Coast of Florida, small dairy farm, plant and herd. Good reason for selling. Box 368, care this publication. 12-M

Well established milk business in Central Pennsylvania. Approximately 1,000 units per day. Real estate, building, supplies, and equipment, six trucks. Will sacrifice at $28,500. Capacity enough to double the business. Box 367, care this publication. 12-M

FOR SALE—Dairy plant in Wisconsin. This plant is located in Eagle River, Wis., in the heart of the tourist area on the only available business corner in the center of Eagle River where three highways meet. Doing between eighty and one hundred thousand a year in retail and wholesale dairy products, has small dairy bar in connection with tremendous possibilities. Reason for selling, recently injured back and will have to retire from active work. This business can be purchased for the worth of the property alone. Eugene W. Pehong, Rhinelander, Wisconsin. 12-M-2

POSITION WANTED

Versatile Executive, accountant, credit and office manager experienced in dairy bottling plant, ice cream mix, ice cream products. Knows sales, purchasing, departmental operation. Has extensive background with national organization. Seeks connection with progressive firm where hard work and know-how will secure position commensurate with ability. Reasonable salary. Excellent reference. Box 374, care this publication. 12-M

Man Age 48 Married—25 years' experience in the Dairy Industry, as office manager. Complete charge of bookkeeping, auditing, preparation of financial and statistical reports, all Federal and State taxes, unemployment and Social Security reports. Excellent references. Salary to be discussed at interview. Box 365, care this publication. 12-M

AVAILABLE—Young man, 31 years old, married, for responsible position with progressive firm. B.S. degree in dairy industry and bacteriology. Practical experience for 15 years ranging from retail selling, testing, field work, equipment maintenance to plant manager. Can fill any position in market milk or ice cream. Will go anywhere. Box 366, care this publication. 12-M

HELP WANTED

Wanted—Manager for New York City Milk Pasteurizing and Bottling plant. State experience and salary desired. Box 373, care this publication. 12-M-t.f.

NDC WINTER CONFERENCE

Large Attendance Expected at Winter Meeting of National Dairy Council in Winston-Salem, N. C.

CHICAGO — "Building Sales That Stay Sold" is the general theme of the 34th Annual Meeting-Winter Conference of the National Dairy Council to be held at the Robert E. Lee Hotel in Winston-Salem, N. C., on January 27 and 28. About 600 dairy industry executives from coast to coast are expected to attend.

The dairy industry in North Carolina and the three affiliated Dairy Council Units are serving as hosts to the national meeting. They are the Durham, Raleigh, Burlington Unit; the Greensboro, High Point Unit; and the Winston-Salem Unit.

In announcing the event, Milton Hult, president of NDC and general chairman, stated the program was being built around current and future problems affecting the dairy industry and ways to create a better consumer understanding of the industry and its products. To this extent, topics such as "Problems and Solutions Facing America's Food Industry", "Outlook for the Dairy Farmer", "Outlook in Dairy Marketing" and "Education is the Answer", will be discussed by nationally recognized authorities to be announced in January.

Another important phase of the program will deal with the functions of the National Dairy Council and its relationship with the 52 affiliated Dairy Council Units and their branch offices in key cities throughout the country. What these organizations mean to the dairy industry will highlight one of the major discussions during the conference.

Committees, both National and Local, are in the midst of making final plans on arrangements, programing, publicity, attendance, registration, hospitality and entertainment. Serving with Mr. Hult as general chairman is L. L. Ray, co-chairman. Mr. Ray is the executive vice president of the North Carolina Dairy Products Association at Raleigh, N. C.

●

REMODELING IN CALIFORNIA

Extensive remodeling, which will make the University Farm Creamery one of the most modern to be found, according to advice from the west coast, has started on the Davis campus of the University of California. This creamery, used as a practical laboratory by the dairy industry division of the College of Agriculture, will be ready with its new improvements in about six months, although active operations will be suspended for only about three weeks during the alterations, according to Dr. E. L. Jack, head of the division.

The contracts call for a new drainage system, a new floor, and some structural changes to provide for new machinery. The new drains will connect with the enlarged sewer system now being installed on the campus. The new floor is to be of red tile, laid on a concrete sub-floor. The machinery to be provided for includes a modern bottle and case washer, and an up-to-date refrigeration system.

Included in the remodeling will be the installation of other machinery in several departments. Four ammonia compressors and an evaporative compressor will provide adequate refrigeration. Its installation will make room for pilot plant experimental apparatus with which to study condensed and dry milk. The bottle and case washer will connect directly with the milk bottling machinery adjacent to a new milk storage room.

The receiving room will be completely remodeled with a new can washer, and weighing and receiving tanks. A conveyor is to be added to improve the efficiency of this operation.

SPECIAL NOTICE

- Nationally known Dairy and Ice Cream Equipment Manufacturer in immediate Need of Top Flight SALESMAN.
- MUST reside in and have established following in New England states.
- Prefer man between ages 30 and 45.
- We want a settled, sober and reliable man for this important and permanent position.
- Salary, expenses and bonus paid monthly.
- State complete details of personal, business and educational background in first letter.

Address Box 375, c/o American Milk Review.

★ ★ ★

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OF EVENTS TO COME

Western States Dairy Conference—In conjunction with the Colorado and Denver Dairy Products Association, will be held at the Cosmopolitan Hotel, Denver, December 5, 6, 7. Ammon Bradshaw, Secretary, 415 C of C Bldg., Denver 2.

Wisconsin Milk Dealers Association—Annual convention will be held at the Schroeder Hotel, Milwaukee, Wis., December 7-9. Executive secretary, Harry Klueter, 1 W. Main St., Madison, Wis.

Illinois Dairy Products Association—Annual convention will be held at the Morrison Hotel in Chicago, Ill., December 13 to 15, 1948. Secretary M. G. Van Buskirk, 309 W. Jackson Blvd., Chicago 6, Ill.

North Carolina Dairy Products Association—Annual convention will be held at Winston-Salem, January 13 and 14. Executive vice-president, L. L. Ray, Insurance Bldg., Raleigh, N. C.

National Dairy Council—Annual winter-meeting conference will be held at the Hotel Robert E. Lee in Winston-Salem, N. C., January 27 and 28, 1949. President, Milton Hult, 111 N. Canal St., Chicago 6, Ill.

Oklahoma Dairy Products Institute, Inc., will hold its annual convention at the Skirvin Hotel in Oklahoma City, February 6, 7, and 8, 1949. Edd L. Hisel, secretary-treasurer.

Texas Dairy Products Association—Annual convention, Hotel Texas, Fort Worth, Texas, February 9, 1949. J. C. Davison, Jr., 606 Insurance Bldg., Fort Worth, Manager.

Pennsylvania Association of Milk Dealers—Seventeenth annual convention will be held at the Benjamin Franklin Hotel in Philadelphia, Pa., February 22 and 23, 1949. Executive vice-president, Benj. G. Eynon, 324 Telegraph Bldg., Harrisburg, Pa.

Dairy Industry Week, Kansas State College, Manhattan, Kansas, February 22, 23, 24, 1949. Prof. T. J. Claydon, Department of Dairy Industry, Harrisburg, Pa.

Michigan Allied Dairy Association—Annual convention, Grand Rapids, Michigan, March 2-4, 1949. L. N. Francke, 2010 Olds Tower Bldg., Lansing, Mich., Secretary.

West Virginia Dairy Products Association convention will be held August 1 and 2, 1949 at the Greenbier, White Sulphur Springs, West Virginia. John J. Slavins, secretary, 467 Chestnut St., Morgantown, W. Va.

●

ENGLISH, CANADIANS DIFFER

WINNIPEG, Manitoba — Canadian mothers and baby doctors seem to prefer evaporated milk, while in Britain powdered milk is more popular.

This is the opinion of Lt.-Col. W. B. Gates, joint managing director of Cow and Gate Limited, Guildford, Surrey, England, distributors of milk products.

Lt.-Col. Gates, a veteran of Dunkirk, is in Canada contacting agents for the two Canadian subsidiaries of his company, Cow and Gate Canada Limited and General Milk Products, Brockville, Ont. Accompanied by his wife and daughter, he stayed in Winnipeg for a week.

His company's products were used for home consumption, he said. Any of their milk products exported to Europe came from the Canadian subsidiaries.

INDUSTRIAL RELATIONS HEAD

J. E. Niederhauser, formerly manager of industrial relations, Continental Can Company, has been elevated to the newly created post of vice president in charge of industrial relations, according to an announcement made today by Hans A. Eggerss, president.

Prior to his present responsibilities, which for several years have encompassed industrial relations matters for the entire company, Mr. Niederhauser was

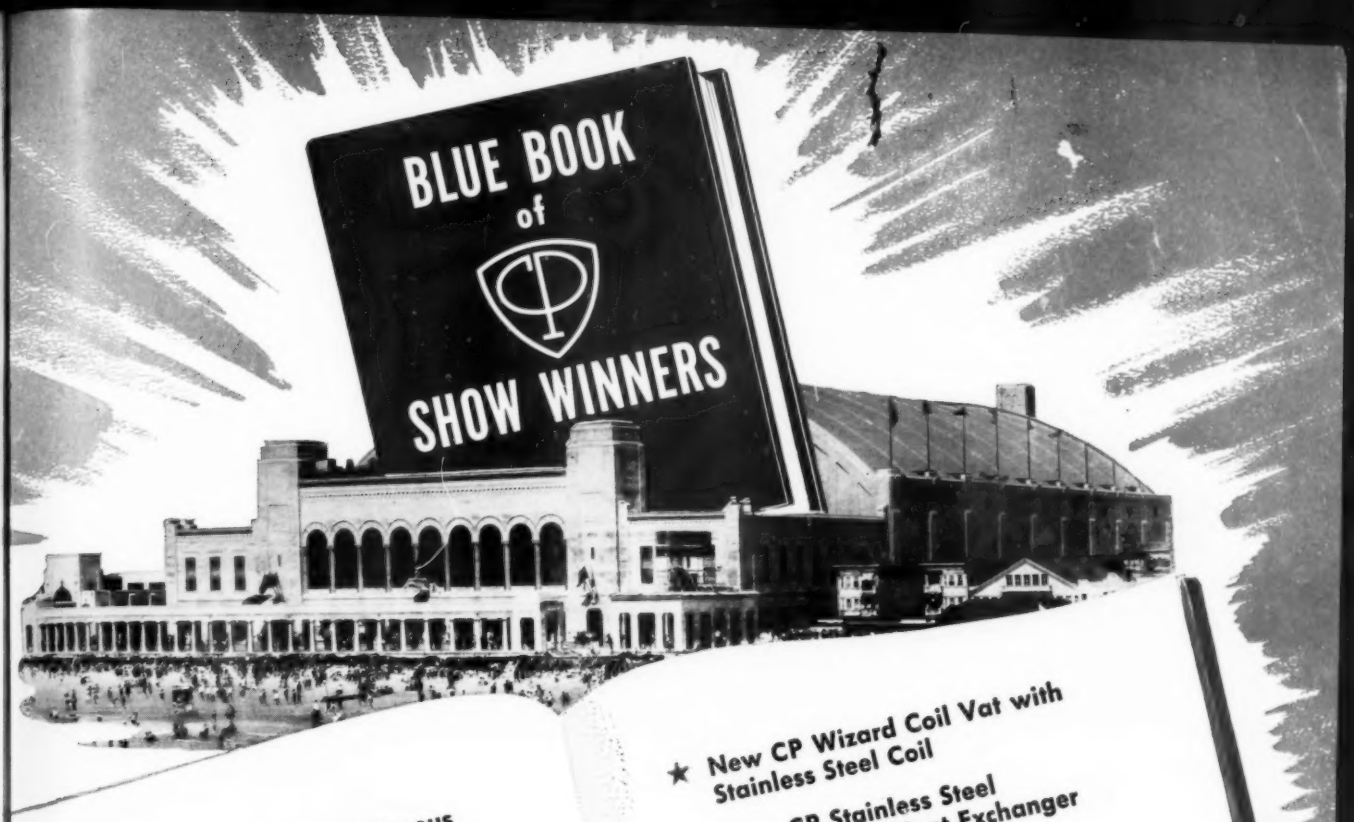
J. E. NIEDERHAUSER

in charge of industrial relations for the company's paper and plastics divisions. For 15 years before this he specialized in personnel work. For six years he was a special representative of the International YMCA in Europe and the Orient. He is a native of Ohio and attended Wooster University.

In announcing this appointment, Mr. Eggerss explained that the directors not only were showing their confidence in Mr. Niederhauser, but also were stressing the importance of Continental's industrial relations program.

"With 56 plants throughout the country employing more than 25,000 people, we have long realized that Continental has definite responsibilities to its employees as well as to the almost two score communities in which our manufacturing operations are located, and we shall continue to interpret these responsibilities very broadly," Mr. Eggerss said. He pointed out that under Mr. Niederhauser's competent direction the company's industrial relations program has made significant and progressive strides forward, and that even greater emphasis will be placed upon this program in the future.

Mr. Niederhauser will continue to make his headquarters in the Continental Can Building, New York City.



★ New CP Stainless Continuous Freezer with Square Dasher

★ CP Regular Style Continuous Freezer with Square Dasher

★ CP Heavy-Duty Fruit Feeder

★ New CP Stainless Fort Atkinson 40 Qt. Batch Freezer

★ New CP Multi-Cylinder Ammonia Compressor—Type K

★ New CP Multi-Cylinder Booster Compressor—Type K

★ CP 2-Cylinder Vertical Ammonia Compressor

★ New CP Intercooler for Booster Systems

★ New CP Stainless Steel Utility Table

★ CP Stainless Steel Roto-Seal Pump

★ New CP Wizard Coil Vat with Stainless Steel Coil

★ New CP Stainless Steel Full-Flo Plate Heat Exchanger

★ New CP Stainless Steel Multi-Pass Plate Heat Exchanger

★ CP Multi-Flo Homogenizer

★ New CP No. 160 Stainless Vacuum Filler

★ New CP No. 100 Gravity Filler

★ New CP No. 70 Gravity Filler

★ CP Stainless Steel Take-Down Capping Head

★ CP Stainless Steel Multi-Process Tanks

★ New CP Wizard Cold Wall Tank

★ New CP Elevating Pneumatic Ice Cream Can Filler

★ Ask your CP Salesman for advance details on CP Show Winners, and request that your name be put on the list for Bulletins as soon as available.

THE Creamery Package MFG. COMPANY

General & Export Offices: 1243 W. Washington Blvd., Chicago 7, Illinois
Branches in 21 Principal Cities

CREAMERY PACKAGE MFG. CO. OF CANADA, LTD.—Toronto 2, Ontario
THE CREAMERY PACKAGE MFG. COMPANY, LTD.—London, England

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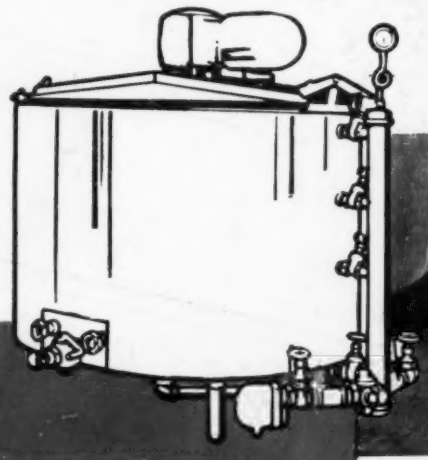
- BUTTERMILK
- CHOCOLATE MILK
- ICE CREAM MIX
- SKIM MILK
- SOUR CREAM
- STARTER
- SWEET CREAM
- SWEETENED CONDENSED MILK
- WHOLE MILK
- SYRUPS

On *every* application *everywhere,* the Mojonnier Vat is in a class by itself! Imitated but never equalled, this unit is the result of years of skilled engineering and long production line experience. Check its features of Simplified Design, Zone-Control, Counter-Current Flow, Coil-Free Interior, Fastest Heating and Cooling, All-Welded Stainless Steel Sanitary Construction, Operating Flexibility, Control and Economy, and you'll *know* why it's rated the No. 1 vat by production men all over the world. Let the experienced Mojonnier Engineer consult with you now about the vat to best serve your particular application requirements. Write:

MOJONNIER BROS. CO., 4601 W. Ohio St., Chicago 44, Ill.



*Send for the name of the plant nearest you where the Mojonnier Vat is in operation.

Mojonnier

Custom-Engineered

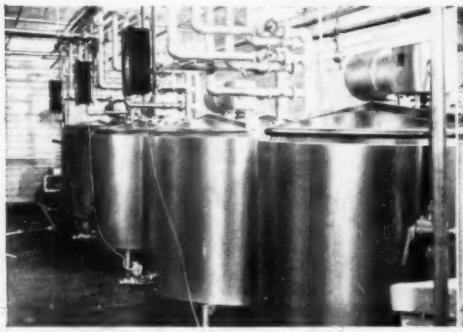
ZONE CONTROL VATS

CREAM

These vats are used in the processing of heavy cream at plant of Jersey Milk and Cream Co., La Fargeville, N. Y.

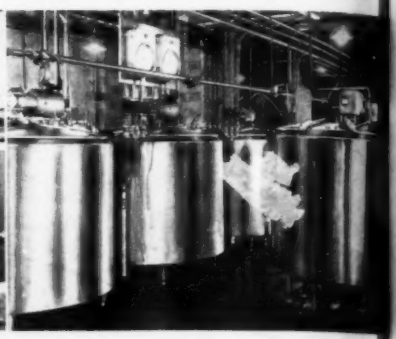
CONDENSED MILK

Three 600 gal. vats in operation cooling condensed milk at McDonald Cooperative Dairy Co., Chesaning, Mich.



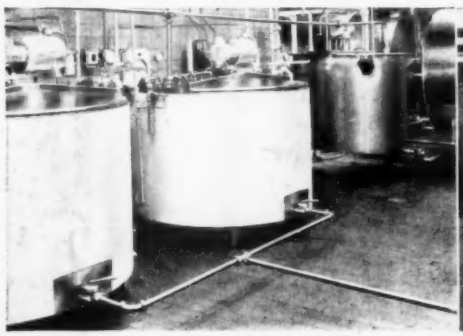
CHOCOLATE & MILK

Four 600 gal. vats in operation in large, Toledo, Ohio, dairy processing all milk products.



BUTTERMILK & CREAM

Battery of six 600 gal. vats at In Wilson Co., Detroit, Mich. processing cream and buttermilk.

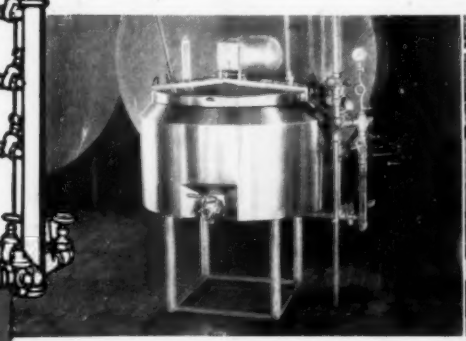


ICE CREAM MIX

Two 500 gal. vats in mix room at Central Ice Cream, Chicago. Mix is pasteurized, then pumped to surface cooler.

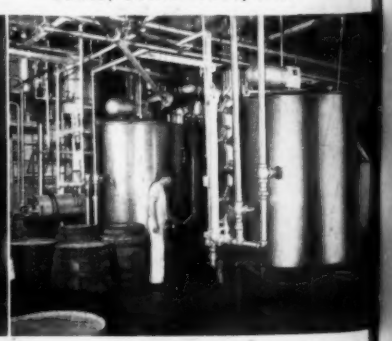
CREAM

Cream from separator is heated to 161° F, cooled over surface coolers, then pumped to these two 800 gal. vats for holding at 40° F. At Pabst Farms, Oconomowoc, Wis.



CULTURE VAT 19177

50 gallon vat at Detroit Creamery producing cultures for buttermilk and acidophilous milk.

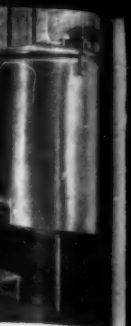


CONDENSED MILK

Two vats cooling sweetened condensed and plain condensed milk. Equipped with plastic scrapers to insure uniform milk sugar crystallization.

Other Mojonnier engineered products widely used by the Dairy Industry include: *Compact Coolers • Cold-Wall Tanks • Tubular Heat Exchangers • Vacuum Pans Tubular Evaporators • Conveyors • Testers • Fillers • Processed Cheese Kettles*

XUM



MILK

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